

LIBRARY
OF THE
UNIVERSITY OF CALIFORNIA.

Class



PAPERS AND ADDRESSES

BY

LORD BRASSEY



Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

PAPERS AND ADDRESSES

BY

LORD BRASSEY, K.C.B., D.C.L.

WORK AND WAGES

EDITED BY J. POTTER

WITH AN INTRODUCTION BY GEORGE HOWELL, M.P.



LONDON
LONGMANS, GREEN, AND CO.
AND NEW YORK: 15 EAST 16th STREET
1894

All rights reserved

HD8390

.B74

GENERAL

PREFACE

IN publishing a collection of addresses and papers on Work and Wages, the author is fully conscious that in the frequent treatment of the same theme repetition is inevitable. An endeavour has been made to present on each occasion new illustrations. It has been difficult to resist the temptation of giving in each paper a general view of the position.

An hereditary connection with industry and enterprise suggested the first speech, delivered in the House of Commons, and the subsequent publication of a volume on Work and Wages. Through a period extending over a quarter of a century, a year has rarely passed without calls for addresses on Labour questions. Such appeals have been generally obeyed. It has always been sought to give practical advice, and to plead for a generous recognition of the merits of the British workman.

*

CONTENTS



CHAPTER	PAGE
I. TRADES UNIONS AND THE COST OF LABOUR. SPEECH, HOUSE OF COMMONS, 1869	1
II. WAGES IN 1873. ADDRESS, TRADES UNION CONGRESS, NORWICH, 1873	32
III. CO-OPERATIVE PRODUCTION. TRADES UNION CONGRESS, HALIFAX, 1874	76
IV. PRICE OF LABOUR IN ENGLAND. REPRINT, 'INTERNATIONAL REVIEW,' NEW YORK, 1876	128
V. TRADES UNIONS. PAPER READ AT TRADES UNION CONGRESS, LEICESTER, 1877	148
VI. COMPARATIVE EFFICIENCY OF ENGLISH AND FOREIGN LABOUR. ADDRESS AT HAWKSTONE HALL, WESTMINSTER BRIDGE ROAD, 1878	165
VII. ON RISE OF WAGES IN BUILDING TRADES OF LONDON. PAPER AT ROYAL INSTITUTE OF BRITISH ARCHITECTS, 1878	182
VIII. ON THE DEPRESSION OF TRADE. REPRINT 'NINETEENTH CENTURY,' 1879	208
IX. COMPARATIVE EFFICIENCY OF ENGLISH AND FOREIGN LABOUR. ADDRESS AT EDINBURGH PHILOSOPHICAL INSTITUTION, 1879	243
X. MOTION FOR COMMISSION ON AGRICULTURAL DISTRESS. HOUSE OF COMMONS, 1879	253
XI. AGRICULTURAL HOLDINGS. LETTER TO 'TIMES,' 1879	268

CHAPTER	PAGE
XII. AGRICULTURE IN ENGLAND AND THE UNITED STATES. ADDRESS AS PRESIDENT OF THE STATISTICAL SOCIETY, 1879	272
XIII. ARBITRATION AWARD. STAFFORDSHIRE POTTERIES, 1880	291
XIV. BRITISH TRADE AND BRITISH WORKMEN. CHURCH CONGRESS, NEWCASTLE, 1881	300
XV. INDUSTRIAL REMUNERATION CONFERENCE, 1885	312
XVI. INSTITUTION OF CIVIL ENGINEERS. SPEECH AT ANNUAL DINNER, 1888	320
XVII. ARBITRATION AWARD. LIGHTERMEN OF LONDON, 1889	324
XVIII. THE ATTITUDE OF THE CHURCH TOWARDS LABOUR COMBINATIONS. CHURCH CONGRESS, FOLKESTONE, 1892	327
XIX. THE SOCIAL SCHEME OF GENERAL BOOTH. HASTINGS, 1892	332
XX. ADDRESS TO WOLVERHAMPTON CHAMBER OF COMMERCE, 1893	337
INDEX	351

INTRODUCTION

By the republication of Papers and Addresses comprised in this volume, Lord Brassey has afforded an excellent opportunity for reviewing the course of events connected with labour, and indicating the changed attitude of public opinion in and out of Parliament during the period embraced by the series of chapters into which the work is divided. They cover the whole of the last quarter of a century, the first bearing date July 7, 1869, and the last being a speech delivered at Wolverhampton in 1893. In the intervening period the most momentous changes have taken place as regards labour, and more especially with respect to the industrial organisations which represent labour, known as Trade Unions.

When the author of these collected 'Papers and Addresses on Work and Wages,' then Mr. Thomas Brassey, Member of Parliament for Hastings, addressed the House of Commons, in July 1869, on 'Trade Unions and the Cost of Labour,' there were

very few men in that assembly who knew anything about Trade Unions, or Labour Questions generally. For the most part, all the speeches made in Parliament at that date were antagonistic to, not in approval of, labour organisations. Indeed, these organisations had only just escaped a possible attempt at extinction. Their suppression by law was significantly hinted at in 1867, only two years previously, by the Mover and Seconder of the Address.

There are, perhaps, but few now living who heard, and fewer still who can remember, the interesting speech of young Mr. Brassey, as he was then called. I was one of the privileged few who listened to it from the Strangers' Gallery, and I felt at once that a happier and brighter time awaited the organisation of labour. A defence of Trade Unions in the House of Commons, at that date, was rather a risky undertaking for a young Member, but the Honourable Member for Hastings carried with him an inherited reputation which commanded a respectful hearing from those whose views, generally speaking, were opposed to the organisation of labour in any form.

In 1869 Trade Unions were practically unlawful societies, and were usually referred to as 'combinations in restraint of trade.' Their best friends spoke of them, and for them, apologetically, as though their existence was a necessary evil in the then state of society, but one greatly to be deplored. Their funds were unprotected, so that an unscrupulous and

dishonest officer could rob them with impunity. In 1869, for the first time, a temporary Act was passed for their protection. That measure called forth Mr. Brassey's speech.

The organisation and rules of Trade Unions had just undergone the severe ordeal of a most searching investigation by a Royal Commission. The primary object was, undoubtedly, the suppression of the Unions, which were assailed in Parliament, in the press, on the platform, and in the pulpit, with a virulence seldom equalled, never perhaps surpassed. The activity, the courage, the growing intelligence, the persistency, and the character and ability of the leaders of the Unions during the electoral campaign of 1868, and subsequently, had to some extent moderated the intense hatred of the capitalist classes; while the extension of the franchise in 1867 had given to the working people a leverage and power not previously possessed. But the Unions were not loved. It is more true to say that they were feared and suspected.

It was at such a time, and under such circumstances, that Lord Brassey made the speech with which the present volume commences. Its significance cannot be understood or appreciated, unless we take into account the state of feeling at the time it was made, the character of the assembly to which it was addressed, the economical doctrines almost universally current as regards the relationship between

capital and labour, and the legal relationship between employers and employed.

Lord Brassey has been fortunate in not having since had to change his ground to any appreciable extent, and not even to vary his opinions very materially. This is the more remarkable when we remember how great the changes have been in public opinion, and even in the teachings of political economists, during the last quarter of a century. To those who know all the facts the reasons are obvious. It is not because Lord Brassey has been stagnant or non-progressive. His ideas and attitude on the Labour Question contained all the germs of gradual development. The real reason is that his first utterances were in advance of the economists and social reformers of his time. He held and propounded advanced opinions, whilst those of his class and position, in common with the economists, were at that date lagging behind.

To what cause, or causes, can we attribute the exceptional position taken up by Lord Brassey in this respect? In the first place, the Member for Hastings of that day brought to bear upon all labour and social questions a broader sympathy than was shown or felt by public writers and Members of Parliament. 'I cannot forget, he said, that the working classes, of whom vast numbers have for many years rendered honest and faithful services to my father, have great claims on my sympathy and

my regard.' He did not seek to hide the facts, or shirk the duty which a knowledge of these facts imposed upon him. The other cause was his relationship to labour. The fact that he was 'the son of an employer on a large scale' gave him a practical insight into the industrial relations of employers and employed. To use a phrase of my own coining, many years ago, while others were eternally preaching the duties of labour and the rights of capital, he saw that Labour had its rights as well as its duties, and that Capital had its duties as well as its rights.

Being thus equipped with broad sympathies and with practical knowledge, and having fewer prejudices than usually fall to the lot of one so circumstanced, he was able to find a solid rock upon which to build the superstructure of his belief. It almost looks now as if he had been able to project himself forward for a quarter of a century, whereas he simply took his stand on the basis of fact. He admits that he was 'impelled by many and potent influences to take an employer's view of the question,' but the claims on his sympathy tempered those influences. At no time, perhaps, in our history were the hard dry facts of political economy more severely drilled into the heads, if not the hearts, of all classes of the people. The class-books even in the National Schools were of the most approved McCulloch type, and were only withdrawn years afterwards in response to

protests by the Trades Union Congress. The 'Fortnightly Review' had, indeed, published some papers pointing to a more humane economical philosophy than 'a bare subsistence wage.' But the generally received theory was that the right principle of trade was to buy in the cheapest and sell in the dearest market.

Lord Brassey was trained in this school throughout his school life and university career. The economic doctrine of 'supply and demand' was drilled into him by class-book and professor. It manifests itself in the earlier part of his speech. But his father's practice tempered the application of the doctrine. Mr. Brassey had found, by experience, that low wages did not necessarily mean cheap production. He further discovered that the cost of production was relative, and that high wages did not necessarily increase the cost. Here was a new side-light for the treatment of economical questions. Father and son saw that efficiency was the secret of success, not mere cheapness of labour. The facts were as old as the hills, but their application to the cost of production was a new starting-point in economics, and to an almost greater extent in the relationship of capital to labour.

Lord Brassey applied his vigorous mind, stored with the knowledge which the university gave him, and matured by the vast experience of his father, and no inconsiderable experience of his own, to the

solution of the question of the cost of production, and what are the essential conditions which govern it. This mainly is the contribution of Lord Brassey to economics, and it comprehends most of what we now hear so much about—'the living wage' and 'shorter hours of labour.' Modern thought is simply applying the theory to practice, with the result that efficiency of labour, as well as of the labour-saving machine, is the true test of cost in production.

'Daily wages,' the author says, 'are no criterion of the actual cost of executing works or carrying out manufacturing operations.' He goes on to quote his 'father's wide experience to prove that there is a remarkable tendency to equality in the actual cost of work throughout the world.' Further on he quotes an instance of the advantage of higher wages, where, in the construction of the North Devon Railway, the wages were raised from two shillings per day to two and sixpence, then to three shillings, it being found that with the higher wage the work was executed more cheaply than at the lower rates.

This doctrine of higher wages, and, as a consequence, greater efficiency, resulting in lessened cost of production, was regarded at the time, and is so regarded still by some persons, as rank economical heresy. The author therefore fortified himself with numerous examples drawn from continental experience, as well as from home industries. Many questioned his conclusions, but none could controvert

his facts. After five-and-twenty years we are slowly learning the pregnant truth taught in that speech of July 9, 1869 ; and Mr. William Mather, in his eight hours' experiment, is enforcing the same truths, gained by personal experience in the engineering trades. English capitalists and employers as a body fail to recognise the value of such a well-established doctrine, or they would more generally apply it in practice to the whole of the British industries.

When we leave the main track of Lord Brassey's new departure in industrial economics, we find him lingering in some of the bye-paths of the old economic school. But even here his clear insight does not lead him far from the chief highway. He sees the right of combination, and urges it. But he has doubts as to the efficacy of Trade Unions to deal with wages, believing that supply and demand are the chief factors in the struggle for higher wages and better conditions of work. He is also somewhat severe upon the ignorance of the leaders in cases of dispute. But all his judgments are tempered by sympathy with the main objects for which they strive, while he condemns the means whereby it was sometimes sought to attain them. In all his strictures we felt that the condemnation was that of a friend—of one who had done much to soften the asperities of less friendly critics, and who had also given us weapons of the keenest edge and best

temper with which to fight our opponents. The spirit in which he recognised the value and worth of Trade Unions is thus expressed:—‘We honour and admire the sentiments of fraternal sympathy which prompt men to promote each other’s advancement in life by that mutual aid and support which these societies are intended to promote.’

He defines his attitude towards combination thus: ‘The right of property gives to every citizen the right to regulate the price of his labour. The exercise of this right in connection with others cannot make that unlawful which it is lawful for every man to do individually. To prohibit simple combination, in the absence of any attempt to coerce the will of others who have taken no part in the deliberation, is an injustice which the representatives of Belgian labour would desire to see removed from their codes.’ In this spirit he advocated the policy of giving protection to Trade Union Funds. After much discussion proposals which had been made in this sense received the sanction of the Legislature, under the provisions of the Trade Union Act, 1871.

In the year 1873 Lord Brassey returned to the subject of Trade Unions in a paper read before the Social Science Association at Norwich, forming Chapter II. of the present volume. The speech of 1869, to which we have already referred, was delivered at a time when the trade of the country was

only just recovering from severe depression, the exports of the produce and manufactures of the United Kingdom having been almost stationary for three years. The paper read at Norwich was prepared under very different circumstances. The cry of foreign competition, so general in 1869, was scarcely heard of in 1873. The trade of the country had advanced in the interval 'by leaps and bounds.' The growth of trade had been considerable in volume and still more conspicuous in value. Wages had also risen. Lord Brassey's paper attributes the advance to the economical principle of supply and demand rather than to the action of the Trade Unions. The failure of the South Wales strike would seem to imply that the leaders of the miners desired to push matters too far, and that a point was reached beyond which the employers would not advance. In the same way a manufacturer might fix too high a price on an article and stop its sale. But the point insisted upon was that Trade Unions could not *control* wages. At the same time it was admitted that they may and do produce results beneficial to the workmen.

Statistics are quoted which show that while the wages of miners advanced on an average from 50 per cent. to 60 or 65 per cent., according to locality, the selling price of coal had risen 120 per cent. In this connection it is important to remember that an advance of 65 per cent. in wages would be covered by

a rise in price of 1s. 3d. per ton. The selling price of coal had been raised in a far higher ratio. Against this Lord Brassey rightly puts as a set off the losses sustained in bad years, and the absence of dividends in years when the expenses were barely met by the cost of production, as compared with the selling price of coal.

Lord Brassey's attitude on the question of the hours of labour is on all-fours with his attitude as regards wages, and is equally liberal. In his 1869 speech he says: 'As the cost of executing work cannot be measured by the rate of wages, so the hours of labour are no criterion of the amount of work done.' In 1873, returning to the subject, he says: 'There are some who think that a limitation of the hours of labour is in itself an evil. I cannot share in this view.' With an increase of leisure, he supports an extension of education, so that the leisure shall be fittingly and advantageously used. In order that with reduced hours production may keep pace with demand, the double-shift system is suggested, especially where mechanical power is largely used. Three shifts might be worked, as on board ship, where there are three 'watches' of eight hours each. Economy in production by the substitution of machinery, and economy in consumption by minimising waste, are fully described.

Foreign competition and high tariffs are discussed with that wide knowledge which comes of

extensive travel and practical experience. As to foreign competition, taking the iron trade as an example, Lord Brassey saw little danger to British trade. But high tariffs seriously hamper home producers. He gave striking proof of his contention that high wages constitute no bar to effective competition, by quoting the case of the Peabody Rifle Company at Rhode Island, which company successfully competed against Birmingham makers and those of Liège. He, however, adds that a monopoly of trade is impossible. Human progress is not, and cannot be, limited to any one nation.

The valuable comparisons between the cost of production in ship-building and engineering at home and abroad, including the rise in wages, decrease in working hours, the tonnage built, and the results of the changes in wages and hours of labour, are mainly useful now as historical bases for comparisons between the results obtained under former and present conditions. Enormous changes have taken place during the last twenty years in ship-construction, in tonnage capacity, in mechanical power, in the speed of machinery, and in the combination of manual labour with mechanical appliances. We trace equally considerable changes in wages and the hours of labour of the great army of workers in Great Britain.

Some reassuring comparisons are instituted as regards the progress of the working classes on the

continent, in Germany, Belgium, Switzerland, France, and Russia. A large increase had been secured in wages, and, in some cases, a considerable decrease in the working hours. These changes assisted to equalise the conditions of competition as between the producers of those countries and Great Britain. Quoting Mr. Redgrave, and endorsing his views, the author says: 'The value of the English workman still remains pre-eminent, although the interval between him and his competitors is not so great as it was; he has not retrograded, but they have advanced.' In support of this view he gives some statistics to show that there had been increasing production with the same number of hands in the textile trades of this country.

Lord Brassey has always exhibited humane feelings towards children and women. He deplored the employment of young children in factories for long hours, and especially their employment underground in the coal mines of Belgium. He advocated also a further limitation of the employment of women, especially in certain circumstances, and urged a prohibition by law. That was in 1873, when he hoped that a measure would be passed in the next session. The amendment of the law as proposed is, however, not yet passed.

The two peaceful methods of dealing with labour problems—arbitration and co-operation—are here touched upon; but as they are specially dealt with

in future chapters of the work, their treatment may for the present be deferred. Lord Brassey urges diplomacy rather than war as the means by which labour problems can best be solved, and supports international concert on the part of workmen as a means to that end. He mildly denounces the Socialist theories of Germany, as 'the pursuit of visionary and impossible schemes.' Amelioration is to be achieved, not by destroying, but by building up. He concludes the chapter by insisting upon the dignity of labour: 'When justly appreciated, the condition of the skilled artisan should be as much esteemed as that of any other class of the community. He whose life is passed in performing much-needed services for his fellow-men, whatever his special calling, holds an honourable station, and social dignity will ever be most effectually maintained by those who are least dependent upon the favours of others.'

Chapter III. deals with co-operative production. It is an address delivered at the Co-operative Congress at Halifax, in 1874. After referring to the progress of the co-operative movement and its effect upon retail traders, the author proceeds to discuss co-operative production as a remedy for the jealousy of capital. He reminds those present that they are mainly interested in securing what they conceive to be justice to labour, while he belongs to the class interested in the rights of capital. Speaking of the

sense of injustice felt by what is believed to be the disproportionate appropriation of profits to capital, he says: 'Whatever political economy may teach, however easy it may be to explain the operations of trade, between wealth and necessity there still exists a contrast, which mingles with the possession of riches a dark alloy, and cannot but make the burden of the poor man harder and heavier to bear.' 'Socialism is the protest of labour against the unequal distribution of the profits of production.' 'There cannot be equality in a society composed of individuals unequally endowed in knowledge, natural aptitude, and in physical and mental power;' but 'while there cannot be equality, there must be justice.' This is the essence of the co-operative system.

It is shown that by co-operative production a standard may be established for the adjustment of wages. Where producers unite the double functions of capital and labour, the handicraftsman sits in judgment on the claims of capital provided by his own thrift and labour, and apportions its profit without doing an injustice to himself in the capacity of producer. Thus a standard will be created by which the relative proportion of profits will be equitably apportioned, and this standard will be taken to represent what constitutes a fair rate of wages in a given industry. If successfully applied, it will become the universal gauge or measure of the work-

man's rightful claims. With co-operative production on an extensive scale, in which the workman takes his part in the deliberations which accord to capital fair interest and to labour its due reward, strikes will cease, and the energies of men will be devoted to successful industry.

Lord Brassey contrasts the unfriendly sentiments entertained towards employers by their workmen in Germany and France, as compared with the happier relations generally maintained in England. Allusion is made to the greater liberality exhibited by the large, as compared with that of the smaller, employers. The author thinks that a low rate of profit is unfavourable to industry, as tending to draw capital from home towards foreign investments. He looks to co-operation for the more equal distribution of wealth, but points to the difficulties, such as the locking up of capital for long periods in great undertakings, and the disadvantages of corporate management. Co-operators seem unwilling to pay adequate salaries in order to secure that rare combination of qualities without which business on a large scale is sure to end in disaster.

Examples of successful co-operation in America, Austria, Sweden, France, and in this country are given. M. Godin's experiment at Guise is favourably reported upon as a great and useful undertaking, although it differs from co-operation in the sense in which that system is understood in England. The

author looks to education as of infinite value to co-operation, as the means of preparing men's minds for the appreciation and adoption of the principle, and as fitting them for carrying out the system in all its details. He approves of the sentiment of solidarity between the working classes of various countries, as tending to remove prejudice, to promote concord, and lessen the dangers of war.

Chapter IV. carries us on to the latter end of 1876. Severe depression in trade had followed the progressive leaps and bounds of 1870 to 1873. Sanguine hopes had given place to gloomy forebodings as to the future of British trade. Lord Brassey returns to the subject of wages under the head of 'The Price of Labour in England.' He starts with a review of the 'law of wages,' as propounded by Adam Smith and Ricardo, supply and demand being the economical bases which govern wages, but he adds: 'The best paid workmen are generally the best, and the worst paid the worst.' 'How few employers of labour act as if they had any faith in the accuracy of these deductions from the experience of mankind.' The modification of the 'law of wages' by the doctrine of efficiency is all-important, especially in view of the fact that the author was endeavouring to reconcile the masses to the reductions in wages which were then general, and were fast becoming universal. Profits had fallen to vanishing point, and interest on money ranged from

3 per cent. in England to $5\frac{1}{4}$ per cent. in St. Petersburg, then the highest rate in Europe. The condition of trade was such that the alternative was lower wages or no work at all.

Over-production and high wages were regarded as among the causes of depression. But the latter, according to the 'law of wages,' was a result of good trade. Then came the decline, and with it a resistance to reductions in a declining market, when the usual consequences ensued. The struggles in the iron trade, the coal trade, and among the agricultural labourers are reviewed. The author's appreciation of the efforts of Joseph Arch and of other leaders of the unions at that date is consistent with his previous expressions of sympathy in labour struggles, undertaken with the object of bettering the condition of the workers. And here comes the important admission that the more powerful and better organised unions suffered less during the long depression in trade than the less organised, showing that the 'law of wages' is modified not only by the doctrine of efficiency of labour, but by wholesome association, giving mutual protection in the hour of need.

Chapter V., on Trade Unions, consists of a paper read before the Trades' Union Congress, at Leicester, in 1877. The depression in trade had become more acute, but the lowest level had not been touched. In reply to the allegations as to the deterioration of British workmen, Lord Brassey points out that while

wages may be higher in England than elsewhere, the labour performed is cheaper, from its greater effectiveness, and from the saving of unnecessary supervision. In support of that view he quotes the statistics of trade in the United Kingdom as compared with France and other foreign countries, even in the face of heavy tariff duties. As regards the complaints against British workmen, he shows that similar complaints are made against workmen in other parts of Europe and in America. He reiterates his former views as to the relative cost of production in various countries, notwithstanding the difference in wages, but cautions the workmen against unwise restrictions in restraint of trade. With this proviso he supports their aims and aspirations with respect to the bettering of their condition, both as regards wages and hours of labour. Excessive competition and over-trading are condemned as unwise and injurious.

Chapter VI., on 'The Comparative Efficiency of English and Foreign Labour,' is an address delivered in 1878, depression in trade being then general, accompanied by a vague dread of foreign competition. The author admits that labour is dearer, and to some extent less efficient; but states that the same complaints are heard elsewhere. The protective tariffs of other countries render competition more difficult, as shown by the *ad valorem* percentages imposed in several competing countries, in

the textile trades, and in the iron and steel industries. The imposition of artificial restrictions on labour, by working at half-speed to prevent over-production, are condemned, as impairing the efficiency of the workmen.

Chapter VII., on the Rise of Wages in the Building Trades of London, is a review of the state of wages from 1837 to 1877. Lord Brassey tabulates and condenses a variety of information upon the advances in wages, reductions in the hours of labour, and differences in the cost of living. He proceeds to draw the following conclusions from the information collected and presented :

I. That while wages have increased by 44 per cent. in thirty years, the cost of building has increased by 20 to 30 per cent.

II. Advances in wages have been largely absorbed in the enhanced cost of living.

III. The increase in wages has been caused by unprecedented activity in the building trades.

IV. The prospect of a more satisfactory organisation of the building trades depends on the adoption of an equitable system of payment by piece-work. In discussing the question it must always be remembered that Lord Brassey advocates an equitable system, not a sweating system. Payment by results he deems to be fair, and as tending to efficiency both in skill and speed.

Chapter VIII. was written in 1879, when depres-

sion in trade was at its worst. The object of the writer was to promote more cordial relations between labour and capital. It is shown that the decrease in our foreign trade was due rather to a fall in prices than to decline in quantity. Among the causes of depression, special reference is made to the depreciation of silver, excessive military expenditure, reckless trading, over-production, and loans of capital to bankrupt States. The United Kingdom also suffered from bad harvests during three successive years, the losses amounting to eighty millions sterling. The outlook was not reassuring. Wages had fallen; profits had disappeared. Those in work were on short time. The diminished purchasing power of the working classes materially contributed to the general depression in trade. Lord Brassey's faith in the recuperative power of British industry and capital remained unshaken.

In Chapter IX. the 'Comparative Efficiency of English and Foreign Labour' is again dealt with, in an address delivered at Edinburgh, in 1879.

Chapter X. is a speech delivered in the House of Commons in the same year, 1879, on the 'Motion for a Commission on Agricultural Distress.' It deals with foreign competition in natural productions, and urges a better system of farming, and the more extensive cultivation of such produce as is least affected by the importation of foreign and colonial articles of consumption. It is pointed out that various countries

have advantages in soil and climate over England, and that these adverse conditions must be taken into account. Lord Brassey, while opposed to Protection, is in favour of better security for the tenants, and a limitation of settlements of land.

Chapter XI. is a reprint of a letter to the *Times* dealing with the size of 'holdings' in France, in Germany, and Belgium, and favouring the extension of small holdings, especially for dairy farming.

In Chapter XII., the position of agriculture in England and America is considered, in an address as President of the Royal Statistical Society. This address was delivered towards the close of 1879, when the first gleam of commercial sunshine was manifest, but when dark clouds still hung gloomily over the 'landed interest.' The competition of American producers and exporters was then felt mostly in wheat, though other cereals were being largely cultivated. A mass of statistics is supplied of the various crops of cereals, potatoes, hay, and other produce, live stock, the cost of transit, and the cost of labour in England and the United States. The fall in prices, lower profits, and lessened income would to some extent be compensated for by the increased purchasing power of money, and by the cheapness of the necessaries of life.

Chapter XIII. deals with arbitration. Lord Brassey had undertaken to act as umpire in a dispute in the Potteries, affecting some 50,000 workpeople.

Chapter XIV. consists of an address on 'British Trade and British Workmen,' delivered before the Church Congress, in 1881. Reverting to foreign competition, and to the discussions on Free Trade and Protection, Lord Brassey shows that the fluctuations and contractions in trade were mainly in values, not in volume.

The Industrial Remuneration Conference, 1885, forms the subject of Chapter XV. As evidence of social progress it is shown that better remuneration for labour and the general cheapness of articles of consumption had resulted in a higher standard of living than formerly existed. Low rates of interest are shown to be favourable to labour. The idea that the rich are growing richer and the poor poorer is shown to be false. But we had not yet reached a satisfactory state as regards the distribution of wealth, or as regards the relationship between capital and labour. Co-operative industry and thrift are urged as the two great factors in future progress, and as active instruments in the advancement of the masses. Reckless over-production and the squandering of money in barren enterprises and loans to bankrupt States are condemned.

Chapter XVI. consists of a speech delivered in 1888 at the Institution of Civil Engineers. It treats of the services rendered by contractors for great public works, and by the stalwart bands of navvies who, with pick and shovel, made our railways, dug

our canals, bored our tunnels, and worked at the siege of Sebastopol.

Chapter XVII. gives Lord Brassey's Award in matters in dispute between the lightermen of London and their employers, in 1889.

The attitude of the Church towards Labour is dealt with in Chapter XVIII., in an Address at the Church Congress of 1892. Lord Brassey insists upon the duty of the Church to 'keep in touch with all the great interests of the country, and all the best aspirations of the people.' 'Moral progress and spiritual elevation cannot be looked for in a population living in a state of physical degradation.' His ideal condition of industry is one in which labour and capital are identical in interests, as in co-operative production. The influence of the clergy should not be exerted in antagonism to Trade Unions. But they must do more than preserve a negative attitude. They may assist in preventing strikes. To do this they must study labour problems.

The 'Social Scheme of General Booth' is discussed in Chapter XIX., in a speech at Hastings in 1892. Lord Brassey defines the object of General Booth to be 'to raise the helpless from the slough of despond into a condition to earn an honest living.' With that object he sympathises. But he is careful to point out that the expenditure of 50*l.* per head in the Essex experiment, on men housed in a barrack, cannot be accepted as a permanent social condition. He prefers emigration. He deals with the Poor

Laws, and the danger of reverting to the system which obtained before 1834. Self-help, self-denial, prudence, and industry are the real levers by which the masses can be improved permanently in their condition. He would not leave the 'submerged tenth' to the unchecked laws of political economy. Economic forces alone cannot help them. He condemns the carping criticism of those who suggest no alternative schemes.

Chapter XX. is a speech delivered in 1893 at the Wolverhampton Chamber of Commerce, in reply to the toast: 'Prosperity to the Commerce of the Empire.' Improvements in machinery, rapidity of manufacture and transport, the accelerated and cheapened distribution of commodities, and accumulated capital seeking an outlet profitably in trade, have all been at work, with the result that production has increased beyond the immediate demands of the world. It is necessary to promote consumption by the opening of new markets, and to lessen production when profits are falling to a vanishing point. References are made to the opening up of Africa, of China, and the Colonies, the latter affording the best outlet for investments, if not recklessly made when profitable undertakings are overdone. In the matter of Protection, the example of France is cited as an instance of failure to produce the beneficial results anticipated. Lord Brassey is sympathetic towards the eight hours' movement, but states that 'there are insuperable objections to interference by legisla-

tion with the freedom of adult workers.' Legislation of this kind finds no favour in Europe, America, or our Colonies, except New Zealand. In Australia the eight-hour day is customary in all laborious trades, though not established by legislation. 'Nothing will so conduce to the prosperity of our trade as the maintenance of the national reputation for truth and justice, and for honesty, courtesy, and liberality in all our dealings.'

The work before us is crammed full of facts and statistics, of the opinions of experts on the various matters discussed, and is distinguished by a liberal treatment of all who differ from the views expressed. The foregoing pages simply indicate the train of thought, the course of treatment, and to some extent the conclusions generally of the author. The reader must refer to the several chapters for a full exposition of his views.

The twenty chapters which comprise the present volume furnish a series of historical landmarks covering the last twenty-five years—a period in many respects the most remarkable in the industrial history of the world. The aggregate Foreign and Colonial trade of the United Kingdom, taking the average of five years ending with the year 1869, and comparing it with the last five years, 1889 to 1893 inclusive, has grown from 516,006,562*l.* to 726,797,973*l.* In volume the increase is vastly greater than in value. The capacity of production has increased in nearly every industry by newer developments of mechanical

contrivances and their application to productive industry, and also by the aggregations of capital for great industrial enterprises. Material progress and the accumulations of wealth have been enormous. Educational institutions cover the land to an extent scarcely dreamed of in the year 1869. The standard of living has risen to a higher plane. Labour has taken its rightful position in the councils of the nation and in the municipal and other public bodies.

The development has been enormous and continuous all along the line—in Friendly Society organisation, in co-operative effort, and in the organisation of labour, especially by Trade Unions. The increase in membership, in accumulated funds, in the expansion of benefits, and otherwise, has exceeded that of any period in British history. By the liberal legislation of recent years Trade Unions have passed, as it were, from bondage to freedom. The advance has been no less marvellous in all that pertains to the welfare of the people and the bettering of the condition of the masses, both socially and industrially. The bare catalogue of legislative measures would fill many pages. The list includes the extension of the Factory and Workshop Acts, Mines Regulation, the Acts relating to Merchant Seamen and Canal Boatmen and their families, Truck, the Payment of Wages, Employers' Liability, the condition of Women and Children, Friendly Societies, Industrial and Provident Societies, Building Societies, Savings Banks, Patent Laws, Workmen's Dwellings,

Acts for the Preservation of Commons and Open Spaces, the provision of Parks and Playgrounds, the Adulteration of Food and Drinks, and the securing of full weight and measure to all classes of consumers. This list merely indicates the character and direction of the legislation of the last quarter of a century. It by no means exhausts the legislative roll.

The several chapters in this volume indicate the questions uppermost as regards labour at the dates when they were written. Hence their value. Had they been written in this year of grace 1894, some expressions might have been modified, some facts omitted, some deductions reviewed. But then the work would have been totally different in character and purpose. The book is welcomed as a valuable contribution to economic and industrial history, as embodying the views of a practical man of business, drawn from wide experience, extensive travel, and from personal contact with large employers of labour and with the best known and most trusted leaders of the working classes during a period of twenty-five years. New men, of lesser experience, may question some of the conclusions; but all must admit that the subjects are dealt with sympathetically and liberally, and in a manner which entitles the author to the respect and gratitude of the working classes, on whose behalf mainly the papers and addresses were written and are now republished.

GEORGE HOWELL.



LABOUR QUESTIONS

AND

AGRICULTURE

I

*TRADES UNIONS AND THE COST OF
AGRICULTURE.*

SPEECH DELIVERED IN THE HOUSE OF COMMONS, JULY 7, 1869.
WITH ADDITIONAL STATISTICAL DETAILS

I AM anxious, as the son of an employer on a large scale, to offer a few remarks on the important subject now under the consideration of the House. While impelled by many and potent influences to take an employer's view of this question, I cannot forget that the working classes, of whom vast numbers have for many years rendered honest and faithful services to my father, have great claims on my sympathy and my regard.

Before entering upon the discussion of the details of the subject, I would venture to remind the House that the tendency to combination, for the purpose of promoting their mutual interests, is no new thing among the industrial classes. The Guilds of the middle ages were but the forerunners of the Trades Unions of to-day. The strikes of modern times have had their counterpart in the Jacquerie riots of the fourteenth century. And

Origin of
Trades
Unions

when we take into view the great changes which have been brought about in the industrial organisation of this country during the present century, the substitution of steam for manual power, and of machinery for hand labour, and remember that the resources of machinery can be most fully developed only when applied on a large scale, the reasons why workmen have gathered together in recent times, in numbers so vast, round our great industrial centres are not far to seek.

Now, when operatives have thus been assembled in great numbers under the same roof, tending the same machine, working at the same table, is it not natural—nay, reasonable—that they should confer and take action together on all questions of mutual interest? In this most legitimate tendency Trades Unions have had their origin. It is further to be observed that no law, however severe, has been successful in destroying such combinations. The penalties with which combinations in restraint of trade were punishable under former laws, now happily repealed, had the effect of causing proceedings to be conducted in secrecy, for which it is most desirable, in the interests of society at large, to secure the greatest possible publicity.

The right to
combine

It is now generally held that the legislature would not be justified in refusing to the operative classes the right to combine voluntarily—for the purpose of regulating, as far as they can, the terms on which they shall sell their labour. At the same time, every possible protection which the law can afford against coercion and intimidation on the part of trade combinations, ought to be given to the operative who wishes to preserve his independence.

Errors and follies have marked the policy and conduct of some Trades Unions. In regard to trade inte-

rests generally, as distinguished from benefit objects, their influence has too often been essentially illiberal, anti-social, and calculated to establish among the industrial classes of this country that subdivision of caste which has been the great curse of India. There is a tendency on the part of the men to ignore the interest of the master, as if his success were not essential to their own prosperity. In his evidence before the Trades Union Commissioners, Mr. Connolly, of the Masons Society, made the frank confession that their rules were for the men, not the masters. 'They want,' he said, 'the greatest profit, we the highest wages.'

The power of Trades Unions, both for good and for evil, has been greatly exaggerated. When the demand for labour is increasing, and employers begin to compete against each other for the supply of labour, wages will rise from natural causes. Organised and united action may secure an advance of wages at a somewhat earlier date. In the great majority of cases, the competition among employers would bring about equally beneficial results to the working people. The advantage to the working classes of obtaining the advance at an earlier date is not sufficient to compensate for the expense of perpetually maintaining, by heavy subscriptions, a Trades Union organisation, still less to compensate for the great loss caused by unsuccessful strikes.

Limited
power of
Trades
Unions

The most protracted strikes have generally taken place, not for the purpose of securing an advance, but for the purpose of resisting a fall, in wages. Resistance to a proposed reduction of wages was the cause of the engineers' strike in 1852; of the strike at Preston in 1853; of the strike in the Iron Trade in 1865; and of the strike of the colliers at Wigan in 1868. In each of these cases the masters had found it necessary,

Causes of
strikes

in consequence of the depressed state of trade, to reduce the wages of the men. The men, ignoring the circumstances of the trade, and looking only to what they believed to be a degradation of their position as workmen, refused, until after a protracted and painful struggle, to accept the reduction originally offered by their employers. In point of fact, employers as a general rule, from motives of kindness and consideration towards their workmen, are above all things anxious to avoid reductions of wages. They rarely ask their workpeople to accept a lower rate of wages, until the condition of their trade has become so unfavourable as to make the reduction absolutely necessary. And here I may observe that the power of combination has been proved, by experience of its results, to be at least as much for the advantage of the masters as the workmen. The defeat of the shipwrights on the Thames in 1852, and, more recently, the failure of the ironworkers' strike in Staffordshire, are conspicuous examples of the power which the masters acquire by combination.

Ignorance of
leaders

No virtue is so freely displayed as generosity, when exercised at the expense of others. Trades Union agitators have too often sought to win the admiration of their auditory by thoughtless declamation against the alleged rapacity of employers, and by loud professions of sympathy with the wrongs of their industrial brethren. Their credulous hearers have been apt to forget that, when the trade in which they are employed is yielding no profit, or is perhaps being carried on at a loss, it is better for the employer to abandon for the time a business in which he has hitherto persevered only in the hope of an ultimate revival of trade, rather than consent to give rates of pay which must inevitably involve him in disaster. The leaders in several protracted strikes

have exhibited a melancholy ignorance of the state of their own trade, and even of the market value of the goods in the production of which they are engaged. How much suffering might have been spared to the working classes if they had but known, before they engaged in a hopeless struggle, the true merits of their case! I was once present at a meeting of employers during a large strike in the coal trade. I had the means of knowing that the wages which had been offered were the highest the employers could afford to pay, and that the markets were so overstocked that it was a positive advantage to stop for a time the working of the pits. The facts were apparently unknown to the miners. It was pitiful indeed to see the hard-earned accumulations of many years exhausted in an obstinate resistance to a reduction of wage, not proposed by the employers until it had been forced upon them by the unfavourable condition of their trade.

Though the co-operative principle and the payment to the workmen of a percentage of profits, which has been adopted by Messrs. Briggs, give some reason for hope that in future the workmen may possess more information in regard to these matters, the day is still far distant when the leaders of the Trades Unions will have such opportunities of knowing the real merits of their case as could alone justify their claim to exercise authority over the actions and opinions of their fellow-labourers. The propriety of asking for an advance, and of striking if it is refused, depends on the state of trade, the amount of business in prospect, and the profits the employers are enabled to realise—circumstances of which the Trades Union agitators are too often wholly ignorant. While I have thought it my duty to condemn the unreasonable proceedings of the Unionist agitators,

More
reasonable
counsels

I rejoice in the conviction that some of the most trusted leaders of the Trades Unions have profited by past experience, and are strongly averse to strikes. Mr. Allen, of the Amalgamated Engineers, stated to the Trades Union Commissioners that their Executive Council was always opposed to strikes. He added—and this is surely one of the best reasons for giving that protection to their funds which is proposed in the Bill introduced by my honourable friend, the member for Frome—that their large accumulations, amounting to 149,000*l.*, only made the members of his society so much the more anxious not to waste their money in injudicious conflicts with their employers.

Supply and
demand

The truth cannot be too forcibly impressed on the members of the Trade Societies, that it is to the operation of the laws of supply and demand, rather than to the action of Trades Unions, that workmen must look for improvement in their wages. An increase of wages can only take place when trade is prosperous, and when the supply is not sufficient to meet the increasing demand for labour. Whenever Trades Unions succeed in imposing arbitrary regulations, which, though by indirect means, practically raise the price of labour, their restrictive rules are only accepted by the masters, in consequence of the scarcity of labour, and the necessity of obtaining the services of every available man. In the natural course of events, without the intervention of Trades Unions, a rapid rise in wages would inevitably result from an increased demand for labour. The building trades in Manchester have succeeded in enforcing a most arbitrary code of rules, which would never have been accepted by the masters, had not the building trade in that city been in a condition of unprecedented activity during the last five years.

Though the state of business may thus have induced employers to submit for a time to the harsh terms imposed, it is equally clear that the workmen will ultimately be the greatest sufferers by their own folly. By the system which they have adopted, the cost of building must be needlessly increased, and the demand for houses will be proportionately diminished. Sooner or later labour in the building trades will, in consequence, find but scanty employment; and, under the pressure of necessity, workmen will be compelled to accept more reasonable terms of remuneration.

In recent years, in London, as in Manchester, a considerable increase has been accepted in the rate of wages in the building trades. The amount of this increase is shown in a statement prepared for me by Messrs. Lucas.

The building trades

'We find,' they write, 'that for some years previous to September 1853 the rate of wages was as follows :

—	For Mechanics, Masons, Bricklayers, Carpenters, and Plasterers	Labourers
Previous to 1853	{ 5s. per day of 10 } { hours }	3s. per day of 10 hours
From September 1853 to March 1861	{ 5s. 6d.	3s. 4d.
March 1861 to September 1865	{ 7d. per hour, or } { 5s. 10d. per day }	4½d. per hour, or 3s. 6½d. per day
September 1865 to May 1866	{ 7½d. per hour, or } { 6s. 3d. per day }	4½d. per hour, or 3s. 9d. per day
May 1866 to present time	{ 8d. per hour, or } { 6s. 8d. per day }	4¾d. per hour, or 3s. 11½d. per day

We consider that the price of building is 25 to 30 per cent. more now than it was in 1853.'

It is asserted that the organised dictation of the Trades Unions is the cause of the advance in wages in the building trades in London. That advance has been

Advance in wages

the necessary result of the altered relation between the supply of workmen and the demand for labour. The metropolitan railways, the growth of Kensington, Bayswater, and other suburbs, are visible evidences of the pressure of the demand of the master-builders of London upon the supply of labour in the trades which they employ. Abundant evidence in support of this explanation of the cause of the rise of wages in all branches of trade is supplied by employers, by no means friendly to the Trades Unions. Mr. Trollope, for example, made the following admission in his evidence before the Commissioners : 'I am bound to say that hitherto there has been such an enormous pressure of work, that almost every man who can handle a tool has been taken on at an unreasonable rate.' Again, speaking of the advance in wages in the building trades in the provinces, Mr. J. Mackay, an experienced agent in my father's employ, says : 'Wages have risen during the last twenty years from 20 to 25 per cent. ; but, by the force of circumstances, they would have risen as much or more if Trades Unions had never existed.' Mr. Robinson, the Managing Director of the Atlas Works, Manchester, in his evidence before the Commissioners, says : 'I do not think the Unions have altered the rate of wages ; the changes are rather due to the demand for labour in particular branches.' Between 1851 and 1861 no advance took place in the wages of the Engineers, though theirs is the most powerful of the Trades Societies ; but, in the case of the Boiler-makers, wages rose from 26*s.* to 32*s.* 6*d.*, in consequence of the extension of iron ship-building and the great amount of iron bridge-work.

Uniformity
of wages
impossible

Many interesting examples of the effect of unusual pressure upon the labour resources of a sparse and scanty population have presented themselves in the course of

my father's extensive experience. The advance of wages which has occurred in such cases, from the natural operation of the laws of supply and demand, surpasses the most golden dreams of the Trades Unions. When the Grand Trunk Railway was being constructed in Canada, my father sent out a great number of operatives from this country. Men engaged in Lancashire and Cheshire, on landing in Canada, received for doing the same work 40 per cent. more than they had been earning in England. The supply of labour in England was abundant, while in Canada skilled artisans were comparatively scarce. In Spain, in the construction of the railway from Bilbao to Tudela, the wages earned by labourers, which at the commencement of the contract were 1s. a day, rose before the works were completed to 3s. a day. On the same contract, the wages of the masons increased in the corresponding period from 1s. 4d. to 5s. a day. Mr. Mault stated to the Trades Union Commissioners that of the 900,000 men employed in the building trades, not more than 90,500 were members of the Trades Unions. He admitted that while the Trades Unions professed to aim at securing uniformity throughout the country, yet the wages of masons varied in different parts from $4\frac{1}{2}d.$ to $7\frac{3}{8}d.$ per hour, the wages of bricklayers from $4\frac{1}{2}d.$ to $8d.$, and those of carpenters from $4\frac{5}{8}d.$ to $8d.$ an hour. These figures conclusively prove the fallacy of the idea that Trades Unions can secure for their clients a uniform rate of wages, irrespective of the local circumstances of the trade in which they are engaged.

It is said by alarmist employers that Trades Unions have succeeded in raising wages in this country to a point far beyond anything which has been attained in the corresponding trades on the Continent. Daily wages

Equality
in cost of
work

are no criterion of the actual cost of executing works or carrying out manufacturing operations. On the contrary, my father's wide experience goes to prove that there is a most remarkable tendency to equality in the actual cost of work throughout the world. In the industries which compete against the manufacturers of the Continent for the supply of the neutral markets of the world, Trades Unions cannot raise the cost of production in this country beyond the cost of producing an equivalent quantity of work abroad, without diminishing the relative rate of profit of the British manufacturer ; and if the rate of profit which could be obtained by an investment of capital in this country were reduced below the profit accruing from a corresponding investment abroad, it must inevitably lead to the withdrawal of capital from this country. In point of fact, the amount of daily wages affords no real measure of the actual cost of work. It is quite possible that work may be more cheaply executed by the same workmen, notwithstanding that their wages have largely increased.

In illustration of this view, I will state to the House what occurred in the execution of a railway in an agricultural district in England, remarkable for the low rate of wages there prevailing among the agricultural labourers. At the commencement of the construction of the North Devon Railway, the wages of the labourers were 2s. a day. During the progress of the work their pay was raised to 2s. 6d. and 3s. a day. Nevertheless it was found that the work was executed more cheaply when the men were earning the higher rate of wage than when they were paid at the lower rate. Again, in London, in carrying out a part of the metropolitan drainage works in Oxford Street, the wages of the bricklayers were gradually raised from 6s. to 10s. a day ; yet

Advantage
of higher
wages

it was found that the brickwork was constructed at a cheaper rate per cubic yard, after the wages of the workmen had been raised to 10s., than when they were paid 6s. a day.

Crossing the English Channel, I will give to the House an example, derived from my father's experience. The Paris and Rouen Railway, commenced in 1842, was the first large railway work executed on the Continent. About 10,000 men were employed in its construction, of whom upwards of 4,000 were Englishmen. It may be confidently asserted that such an exodus of English labour to Continental Europe never before occurred, and it is improbable that it will ever be repeated. For the construction of a pioneer railway on the Continent a special effort was made to secure the services of Englishmen. It was a question whether native workmen could be obtained in sufficient numbers, and it was still more doubtful whether they would possess the necessary skill and experience for carrying out works, which, at the period to which I refer, were a novelty even to English engineers, and entirely unknown on the Continent. Under these exceptional circumstances, a large body of Englishmen were sent over to Normandy. It is scarcely necessary to observe that the employment of English manual labourers abroad must always be a costly and somewhat doubtful policy. In this particular case, it was not found to be disadvantageous in a pecuniary point of view. The English navvies earned 5s. a day, while the Frenchmen employed received only 2s. 6d. a day. On comparing the cost of two adjacent cuttings in precisely similar circumstances, the excavation was found to have been made at a lower cost per cubic yard by the English navvies than by the French labourers. Extending the investigation from France to Italy, Austria, Switzerland, Spain, Germany,

Continental
experiences

Belgium, and Holland, in the cost of railway work, executed by unskilled labour, there is a remarkable uniformity of cost, notwithstanding the striking differences in the rates of daily wages prevailing in those countries.

Wages in
India

The same remarkable tendency to equality of cost exhibits itself even in India. On the Delhi and Unritsur Railway, it has been found, as I am informed by Mr. Henfrey, my father's resident partner in India, that, mile for mile, the cost of railway work is about the same in India as it is in England, although the wages, if estimated by the amount of daily pay, are marvellously low. The coolies, or common labourers, for example, earn about 6*d.* a day ; their wages, before the railways caused an increased demand for labour, having ranged from 4*d.* to 4½*d.* a day. Earthwork is executed by the coolies at a cheaper rate than in England ; skilled labour is more expensive ; while the necessity of employing a numerous body of English foremen greatly enhances the cost of supervision, which in India is found to amount on an average to 20 per cent. on the entire outlay. In Italy, as in India, a numerous but unskilled population, in a climate where the necessaries of life are inexpensive, can undertake the mere manual labour at a cheaper rate than in England. When the local labourers are alone employed, the Italian villagers, men, women, and children, carrying earth to and fro in baskets on their heads, and as ignorant as the coolies themselves of the resources and appliances of mechanical science, can execute earthwork about as cheaply as in India. Masonry and other work requiring skilled labour are rather dearer in Italy than in England. In the Mauritius, the result of the experience acquired in the construction of a railway by my father's partner, Mr. Longridge, established the same result as in the cases already quoted. Though the nominal wages

Italy

Mauritius

are low, yet, taking into account the extra supervision, the cost of earthwork, rock-cutting and masonry is quite as great, while skilled work, as, for example, carpentry, is from 20 to 25 per cent. more costly in the Mauritius than in England.

The facts quoted are the result of the experience of many practical men, engaged during the last quarter of a century in executing railway works of the greatest magnitude in every quarter of the globe. It was written a hundred years ago, by the great practical philosopher Montesquieu, in his 'Esprit des Lois:' 'Il y a dans l'Europe une espèce de balancement entre les nations du Midi et celles du Nord. Les premières ont toute sorte de commodités pour la vie et pour les besoins; les secondes ont beaucoup de besoins et peu de commodités pour la vie. L'équilibre se maintient par la paresse qu'elle a donnée aux nations du Midi, et par l'industrie et l'activité qu'elle a données à celles du Nord.'

Montesquieu
quoted

The recent interesting publications of Mr. Lothian Bell, the report to Congress of Mr. Commissioner Wells, the Special Commissioner of Revenue in the United States in 1868, and the report of Mr. Redgrave, tend to prove that the cost of labour cannot be conclusively determined merely by reference to the rate of daily wages paid in the respective industries.

Mr. Lothian Bell, in a recent address read at a meeting of ironmasters in the North of England, gave the result of his investigations as to the cost of smelting pig-iron in France. More men were required to do an equivalent quantity of work in France than in England. From a careful inquiry at a large French establishment he had ascertained that forty-two men were employed to carry out the same amount of work which twenty-five men were able to do at the Clarence Factories

Comparative
cost of
smelting

on the Tees. In spite of the actual labour on a ton of pig-iron for smelting being 20 per cent. cheaper in France than in England, the entire smelting charges were sensibly greater in France than in the general run of work at Middlesbro'. Taking into account the saving in respect of fuel, the cost of producing pig-iron in France was 20s., in some cases even 30s., more than that exhibited by the cost-sheets of the manufacturers at Cleveland.

Mr. Hewitt, an American ironmaster, stated that the price of iron was 1*l.* sterling per ton higher at Creuzot than in England. Monsieur Michel Chevallier, in his introduction to the Reports of the Jurors of the French Exhibition, in 1867, remarks that rails are from 25 to 30 francs dearer per ton in France than in England. To the same effect, Mr. Lothian Bell points out that whereas labour in Westphalia costs from 20 to 25 per cent. less than with us, the labour-saving arrangements are much neglected. A ton of iron smelted in the Ruhrort district cannot be produced for less than 15*s.* a ton above the cost upon the Tees. A similar difference is shown in the rails recently purchased for the Mont Cenis Railway, the price of which at the works in France was from 7*l.* 12*s.* to 8*l.* per ton ; in England 7*l.* per ton. The French import duty on rails is 2*l.* 8*s.* per ton.

Mr. Commissioner Wells, in an able report to the American Congress, has discussed in minute detail the important question under review. Taking the puddling of iron as the representative process of the trade, he found that the average price of labour per day for puddlers was from 7*s.* 6*d.* to 7*s.* 10*d.* in Staffordshire ; 6*s.* 4*d.* in France ; and from 4*s.* 9*d.* to 5*s.* in Belgium. Yet the average price of merchant bar-iron was 6*l.* 10*s.* in England, 7*l.* in Belgium, and 8*l.* in France.

Reporting on the textile industries in England, Mr. Redgrave, one of Her Majesty's Inspectors of Factories, observes that while the foreigner is under the same conditions as to the raw material as the English manufacturer, while his fuel is more expensive, his workpeople do not work with the same vigour and steadiness as Englishmen. The same number of operatives, employed upon the same machinery, do not produce the same quantity of yarn as in England. 'All the evidence that has come before me has gone to prove that there is a great preponderance in favour of this country. Comparing the work of a British with a foreign spinner, the average number of persons employed to spindles is—in France, one person to fourteen spindles; in Russia, one to twenty-eight spindles; in Prussia, one to thirty-seven; in Great Britain, one to seventy-four. I could find many cotton-spinning factories in my district, in which mules containing 2,200 spindles are managed by one minder and two assistants.' 'I have recently been told, by one who had been an English manager in a factory at Oldenburgh, that though the hours of work were from 5.30 A.M. to 8 P.M. every day, only about the same weight of work was turned off under English overlookers as would be produced in a working day from 6 A.M. to 6 P.M. in this country. Under German overlookers, the produce was much less. The wages were 50 per cent. less in many cases than in England; but the number of hands, in proportion to machinery, was much larger. In some departments it was in the proportion of five to three. In Russia the inefficiency of the labour of the foreign operatives, as compared with the labour of the English, is even more strikingly manifested. On a comparison of the wages, supposing the Russian operatives to work only sixty hours a week, as they do in

British and
foreign
labour

England, instead of seventy-five, as they do in Russia, their wages would not be one-fourth the amount earned in England. But the wage must be taken into account with the power of the operative as a producer; and herein will be found an advantage of the English operative over the foreign competitor, sufficient, with some qualification, to counterbalance the mere cheapness of wage.'

Mr. Wells confirms the view expressed by Mr. Redgrave. 'Whereas female labour in the cotton manufacture is paid at from 12*s.* to 15*s.* a week in Great Britain; at from 7*s.* 3*d.* to 9*s.* 7*d.* in France, Belgium, and Germany; at from 2*s.* 4*d.* to 2*s.* 11*d.* in Russia; the one thing which is most dreaded by the Continental manufacturers everywhere is British competition. The demand for protection is loudest in France, Austria, and Russia, where the average wages reach their minimum.'

Protective
duties

The operation of the protective duties imposed by foreign countries upon British goods, is strongly condemned by Mr. Murray, one of the British Commissioners for the French Exhibition in 1867. In his report on the manufacture of cotton goods in this country, he says that 'In 1865 the value of the English imports into France was twenty-five million five hundred thousand pounds, the value of the raw materials being eighteen million pounds, and the value of British manufactures not three million pounds, and those manufactures paid an average duty of 10 per cent., ranging from 27½ per cent. on pottery, to 7½ per cent. on metal work. On the other hand, France exports to us twenty-one million pounds of her manufactures. She takes an unmanly advantage of our adoption of a large and noble principle.'

Hours of
labour

As the cost of executing work cannot be measured by the rate of wages, so the hours of labour are no cri-

terion of the amount of work done. In 1842 Messrs. Hornby, at Blackburn, made a calculation that, even if their operatives were paid the same wages for working sixty hours as for sixty-nine hours per week, the increased cost would be so small as not to be weighed in the balance against the advantage to the operatives themselves of a larger amount of leisure. More recently, Monsieur Dolfus, of Mülhausen, reduced the working hours in his establishment from twelve hours to eleven hours per day ; and promised the men that no reduction should be made in their wages if the amount of work they performed was equal to what it had been before. After a month, it was found that the men did in eleven hours, not only as much work, but 5 per cent. more than they had previously done in the day of twelve hours.

The examples already quoted will sufficiently show that higher wages and shorter hours of work may not be found incompatible with a diminished cost of production ; and that low wages and long hours may sometimes prove less advantageous to the employer than shorter hours of labour and a higher rate of wages. This apparent anomaly is partly explained by the necessity of giving to the labourer, who has to undertake severe manual exertion, the means of procuring a generous diet. In Belgium the workmen are not so expensive in their habits as the English artificer. They consume less meat ; their bread is seldom purely wheaten ; and they work for lower wages. They cannot have the same physical vigour as the English labourers, who are better fed.

We may now proceed to examine the statements, widely circulated, and largely accepted by the public, to the effect that the advance in the wages of operatives has been greater in recent years in England than in the corresponding period abroad. For the purpose of

Average
wages of
skilled
workmen

elucidating this portion of the subject under discussion, I have obtained statements, extending over sixteen years, showing the comparative rate of wages in several important manufacturing establishments in this country. Full and accurate information on the actual rate and progressive increase of wages abroad, where Trades Unions until very recently did not exist, is contained in the valuable reports compiled, under the instructions of Lord Stanley, by the Secretaries of Embassy and Legation abroad. The opposite page presents a statement of the rates of wages paid by my father to the skilled workmen in his employ at the Canada Works at Birkenhead, since the formation of that establishment. With six hundred hands, or thereabouts, in employment, the number is sufficient to afford a fair opportunity of testing the average wages in the mechanical trades throughout the country. No appreciable addition has been made to the rates of pay in recent years. Since the contraction of trade, consequent upon the late financial crisis, the price of piece-work has been reduced at the Canada Works sufficiently to allow of the construction of locomotives and bridge work at a cheaper rate now (1869) than at any time during the last fifteen years.

Increase of
prices

In France, Belgium, and Prussia, the three great competing countries with England, prices are from 20 to 30 per cent. dearer than twenty years ago. This increase in the cost of living tells immediately upon the price of all labour, especially of common or unskilled labour. Twenty years ago labourers were content to work for 1s. 6*d.* per day. At the present time, from 2s. 2*d.* to 2s. 4*d.* is the ordinary rate of pay. Mr. Fane says, in his report to Lord Stanley, that 'the general rate of money wages in France has increased about 40 per cent. in the last fifteen years in those industries which

Average Rates of Wages Paid to Skilled Workmen at the Canada Works, Birkenhead.

	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Fitters	29 0	28 3	29 0	30 6	28 10	27 6	27 6	27 0	27 10	28 0	28 0	28 1	31 0	32 6	31 0	30 0
Turners	29 4	30 3	31 3	33 0	31 6	31 0	32 0	31 6	32 0	31 6	31 6	31 5	31 6	31 0	30 0	29 4
Coppersmiths and Braziers	31 0	30 10	28 10	29 0	28 0	30 0	31 0	29 6	28 6	28 1	31 6	31 7	32 6	32 0	32 0	30 9
Grinders	27 0	27 0	27 0	24 0	24 0	22 0	26 0	25 6	27 0	27 6	27 6	32 0	28 6	32 0	26 6	23 0
Smiths	31 0	31 5	32 0	31 0	30 0	29 6	30 3	30 0	29 6	31 0	30 6	30 3	31 9	32 9	31 6	30 0
Boiler Smiths	34 0	34 0	35 0	34 0	32 6	33 0	33 8	33 0	32 6	33 0	33 0	34 6	36 0	37 0	36 0	36 0
Bricklayers	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0	34 0
Saddlers and Belt Makers	26 0	27 0	26 0	26 0	27 0	26 0	27 0	27 0	27 0	27 0	27 0	25 6	24 0	24 0	25 0	26 0
Forgemen	36 6	37 0	35 0	33 6	—	—	33 0	36 0	35 6	35 0	34 6	33 0	32 9	33 0	32 6	32 6
Painters	24 0	23 0	24 0	26 0	26 6	25 0	27 0	26 0	25 6	25 6	25 8	26 6	27 6	24 6	24 0	23 0
Moulders	32 0	31 6	33 0	33 0	32 0	31 6	31 6	32 6	32 0	32 6	33 0	33 0	32 9	34 6	34 0	31 6
Joiners and Pattern Makers	28 0	28 6	29 0	28 2	27 6	29 0	29 6	30 0	29 6	29 6	29 0	30 0	30 6	31 4	30 9	30 0
Boiler Makers	31 6	31 0	30 6	32 6	32 0	30 6	31 0	31 6	31 0	31 6	31 3	31 9	31 2	33 0	32 0	32 0

* C 2

compete with foreigners in the neutral markets. This rise in the money wages has been accompanied by a considerable rise in the price of food and clothing ; still, the relative proportions in which money wages and the price of commodities have risen leave a margin in favour of the former.' In reference to the same subject Mr. Wells remarks that already in France and Germany the drain of labour from the rural districts to engage in manufacturing industry in towns has caused much embarrassment to agriculture, and that a further supply of labour from the same source can only be obtained by the payment of higher wages.

Skilled labour on the Continent

I will now quote several examples of the increase in the cost of skilled labour on the Continent. The first case to which I shall refer is the manufacture of machine tools in France. These tools are made to the value of 2,000,000 francs annually. The raw materials used are cheaper since the negotiation of the treaty of commerce with this country. The selling price continues the same, owing to the increasing dearness of labour. At the military clothing establishment of Monsieur Dusantoy, in Paris, 3,300 persons are employed, 800 men, 2,000 women, and 500 children. The wages paid in 1866 amounted to 100,000*l.* The daily wages for men ranged from 3*s.* 4*d.* to 8*s.* 4*d.* ; while in London the rate is stated by Mr. Levi, in his essay on the wages and earnings of the working classes, to be from 4*s.* to 7*s.* At Monsieur Dusantoy's, women earn from two and a half to four francs a day. In London girls earn 1*s.*, and women employed as seamstresses from 2*s.* to 2*s.* 6*d.* a day. Children at Monsieur Dusantoy's earn from one to two francs a day ; in London about one shilling. Again, comparing the present and former rates of wages paid at the famous engine-building establishment at Creuzot, Mr. Fane

states that the number of persons employed at the date of his report was 9,950 ; while the annual expenditure in wages was 400,000*l.* a year. The mean rate had risen between 1850 and 1866 from 2*s.* to 2*s.* 11*d.* per head per day, or 38 per cent. Some men earned from 6*s.* 8*d.* to 8*s.* 4*d.* per day. In addition to their money wages, great facilities are given to the workpeople, at the expense of the proprietors, for feeding, clothing, and educating themselves and their families. Seven hundred families are lodged by the company at 50 per cent. below the normal rate of house rent, and 700 gardens are let at the nominal rent of two francs per annum. At Monsieur Schneider's, without the assistance of a Trades Union, the working people have obtained, during the last seventeen years, an augmentation of wage of 38 per cent. In England, in the corresponding period, the most powerful of all the Trade Societies, with an accumulated fund of 149,000*l.*, has found it impossible to secure any increase in the earnings of its members.

Once more, comparing the rate of wages at home and abroad, we ought to have regard to the fact that abroad employment is steadier than at home. That enterprise, which has been the making of England, tends to produce great fluctuations in the labour market. When trade is good, our ironfounders and cotton-spinners are too ready to increase the productive resources of their establishments. This spasmodic and fluctuating character of our trade produces a constant fluctuation in wages.¹

Wages
abroad and
at home

¹ It is interesting to compare the rate of wages in the dock-yards with the wages paid in the private shipbuilding yards, on the banks of the Thames. The following table, compiled by Admiral King Hall, C.B., gives the rate of wages in Sheerness yard, in the years 1849, 1859, and 1869 ; and I am indebted for the table showing the current rates of wages at the corresponding period

Indian
railways

I will now give to the House some details upon the particular cases, which have been quoted in the newspapers and elsewhere, in proof of the success with which foreigners have engaged in competition with our manufacturers, in branches of trade in which we formerly enjoyed a monopoly. The experience of the Consulting Engineers of our Indian railways does not go to prove that foreign iron-masters or engine builders can successfully compete with the iron-masters and engine builders in this country. Their experience is the more valuable because the Indian railways afford a purely neutral market. There is no personal influence acting on the minds of Indian railway engineers and directors prejudicially to our interests; and no Customs' duties, which are protective to our manufacturers, are imposed upon the importation of our manufactures into India. The

in the private yards on the Thames, to Mr. John Hughes, the manager of the Millwall Works:

Sheerness—Rates of Wages.

—		1849	1859	1869	
<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
	Shipwrights	4	0	4	6
	Caulkers	4	0	4	6
	Joiners	3	6	3	10
8	0	Forgemen	7	0	
5	9	Furnacemen	5	0	
4	8	Assistant Furnacemen	4	0	
5	2	Steam Hammermen	4	6	
6	4	Anchor Firemen, 1st class	5	6	} same
5	6	" 2nd "	4	9	
5	6	Double Firemen	4	9	
4	10	Single Firemen, Vicemen, and Fitters	4	3	
4	4	Hammermen, 1st class	3	9	
3	9	" 2nd "	3	3	

The figures in the left-hand margin show the pay of smiths employed 10 hours a day.

plant and machinery for the Indian railways are purchased in the cheapest market; and it is certain that

Average Rates of Wages paid at Millwall Iron Works.

	Rates of Wages during Years 1851 to 1869							
	1851		1861 to 1865		1865 to 1869		1869	
	per week		per week		per week		per week	
	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>	<i>s.</i>
Fitters	33	to 38	33	to 38	35	to 40	33	to 38
Planers	30	33	30	33	32	34	30	33
Drillers	22	27	22	27	23	28	22	27
Smiths	30	42	30	42	30	42	30	42
„ Helpers	22	24	22	24	22	24	22	24
Moulders	36	38	36	38	36	40	36	40
Pattern Makers	36	39	36	39	39	42	36	39
Joiners	36	39	36	39	36	42	36	42
Shipwrights	42	48	42	48	39	42	36	39
Platers	36	42	36	42	36	42	36	42
„ Helpers	21	24	21	24	21	24	21	24
Rivetters	30	32	30	32	30	32	30	32
„ Helpers	20	24	20	24	20	24	20	24
Caulkers	30	33	30	33	30	33	30	33
Chippers	28	30	28	30	28	30	28	30
Angle Iron Smiths.	38	40	38	40	38	40	38	40
Boiler Makers	36	42	36	42	36	42	36	42
„ Helpers.	21	24	21	24	21	24	21	24
Painters.	21	30	21	30	21	30	21	30

Hours of work, $58\frac{1}{2}$ hours per week.

Average rent of men's houses in 1851 was about 16*l.* per year; and in 1865 about 20*l.* per year. These are six-roomed houses, and in most cases more than one family occupied them.

During the corresponding periods, shipwrights in London have been earning from 6*s.* 6*d.* to 7*s.* a day. The shipwrights in Sheerness yard, certainly not inferior in skill to those employed by the private shipbuilders, could have obtained employment from the private shipbuilders on the Thames at the higher rate of wages. They preferred a more moderate wage, with a certainty of employment, to a higher rate without the certainty of permanent occupation. The same preference for regular work over a less certain employment with a higher wage manifests itself abroad as much as in England. I will take the case of the

the foreigner would be preferred, regardless of national sympathies, if he could compete with the iron trade at

Sotteville engine works, established originally to supply the locomotives for the Paris and Rouen Railway. The employés of a railway company may look upon their service, at least during good behaviour, as being almost as continuous as under a government. Thus it has happened that at Rouen there has been no advance of importance in wages for the last twenty-five years in the class of labour employed by locomotive builders; although, as I have shown already, there has been a very great increase in the wages paid by Messrs. Schneider and other private employers.

It may be interesting to compare the wages at Sotteville with those earned by the same trades in England:

Sotteville Works.

	<i>s.</i>	<i>d.</i>	
Erectors, Fitters, and Turners	24	0	per week.
Smiths	27	0	"
Strikers	18	0	"
Joiners	22	0	"
Modellers	23	0	"
Moulders in the Foundry	22	6	"

Average Rates of Wages paid to Skilled Workmen, Locomotive Works, England.

	1859		1869	
	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Fitters	28	3·15	28	7·69
Turners	28	4·57	29	3·76
Braziers	28	6·85	28	7·06
Grinders	27	6	28	10·50
Smiths	28	5	26	10·35
Boiler Smiths	31	8	30	4·50
Bricklayers	24	5·10	30	·57
Saddlers	19	8	20	3
Forgemen	34	3	34	4·05
Painters	22	10	23	1·60
Moulders	29	4·50	28	5·58
Joiners, Pattern Makers, and Sawyers	24	6·18	24	4·95
Brickmakers	27	8·44	27	5·28
Total average	27	11·23	28	1·28

home, either in quality or price. Let us then examine into the actual state of the facts as regards the supply of rails and locomotives to the Indian railways.

I shall first appeal to the experience of Mr. A. M. Rendel, who has kindly furnished some figures, which are perfectly conclusive as to the pre-eminence hitherto maintained by British industry. In November and December 1865 tenders were invited by advertisement for a large number of locomotives for the East Indian Railway. Eminent foreign as well as English makers were invited to compete, and twenty-two tenders were sent in. Eighty engines, varying in cost from 3,165*l.* to 2,450*l.*, were ordered from English makers, at an average price of 2,600*l.* each; twenty from Kiessler, of Esslingen, near Stuttgart, at 2,550*l.* each; and twenty from an English maker at 2,440*l.*; so that the foreign maker received a price intended to be intermediate between those of the English makers. At the date when the order was given, English houses were very full of work. Not long afterwards, in consequence of the rapid development of traffic on the East Indian Railway, it became a matter of urgent importance to send out additional locomotives as early as possible. Ten were ordered from an English firm at 2,450*l.*; and ten from Esscher, Weiss & Co., of Zurich, at 2,550*l.* each—the price previously accepted by the other foreign makers. At the termination of their contract, Messrs. Esscher, Weiss & Co. made a representation to Mr. Rendel that they had sustained a loss; and asked to be allowed, by way of compensation, to make ten more engines of the same kind, at the enhanced price of 2,800*l.* It is, therefore, very evident that in the results of their competition with the English makers, who were under no pressure in regard to price, all the shops being so full of work that

Pre-emi-
nence of
British
industry

early delivery was an impossibility, Messrs. Esscher, Weiss & Co. had little cause for satisfaction. Indeed, they admitted a substantial loss. But, even if this contract had been more satisfactory to them than it actually proved, their success would have been largely due to British industry. The boiler-plates, the copper fire-boxes, the wheels, the pig-iron for the cylinders, the tubes, and the frame-plates, in short, two-thirds of the materials used in the construction of their engines, came from England in a manufactured state. It was the same with the engines supplied by Messrs. Kiessler. That firm assured Mr. Rendel that they could not think of asking him to accept Prussian iron or copper; and that by far the greater portion of their material came from England. To a certain extent this was according to the requirements of the specification; but no pressure was needed on the part of the engineers. The axles and wheel tires were specified to be of Prussian steel; but for this, they too would have been of English make. The experience of Mr. Rendel is by no means limited to the purchase of locomotives. Rails and iron bridge work upon the largest scale have been supplied in England for the Indian railways for which he has acted. The tenders have been obtained on all occasions, when a large order has been given, by open advertisement, and all Continental makers have been as free to tender, and would be accepted on the same guarantees as English makers. Yet out of the total expenditure during the last ten years, of from seven to eight million pounds, on materials and plant for the East Indian railways constructed under Mr. Rendel's supervision, with the exceptions I have made, the whole of these contracts have been obtained by English manufacturers.

Another interesting and conclusive proof of the

success with which our engine builders can compete for the supply of locomotives is furnished by the following schedule, kindly prepared by Mr. W. P. Andrew, giving the tenders received, in answer to a public advertisement in January 1866, for a supply of ninety-four locomotives :

Tenders for Supply of Engines for the Punjaub Railway.

Country from which tender received	Prices per engine and tender	Country from which tender received	Prices per engine and tender
1. Germany .	£3,156	12. Germany .	£2,680
2. England .	2,990	13. England .	2,680
3. England .	2,960	14. Switzerland .	2,650
4. England .	2,950	15. England .	2,650
5. England .	2,850	16. England .	2,600
6. England .	2,835	17. France .	2,595
7. England .	2,810	18. England .	2,575
8. England .	2,790	19. England .	2,500
9. England .	2,750	20. Scotland .	2,424
10. Germany .	2,750	21. Scotland .	2,395
11. England .	2,685		

Serious alarm was felt when, in 1865, fifteen engines were ordered for the Great Eastern Railway from Messrs. Schneider. These misgivings would probably have been allayed had it been generally known that at the same time when the fifteen engines were ordered from Creuzot, forty other engines were ordered from English firms, and that when Messrs. Schneider were subsequently asked to undertake the construction of twenty-five more engines at the same price as they had agreed to accept for the fifteen engines originally ordered, the offer was declined. The eminent English engineer, at whose instance the original order was entrusted to Messrs. Schneider, possesses, from long residence in France, a special knowledge of French workmen, and it is his opinion that the price of that kind of labour in France is not generally cheaper for a given quantity of work than it is in England, while the material, of course, costs at least as much.

In the present year¹ my father invited tenders for forty engines for a railway in Hungary. The contracts were open to all the world. Of the forty engines thirty-five were given to English, and only five to foreign firms. The prices quoted in the tenders from the German makers were from 2,500*l.* to 2,700*l.* each, while the prices of the English makers were considerably less.

These statements do not bear out the inferences drawn by the Edinburgh Reviewer in his interesting and able article on the comparative industry of nations. With reference to the French Exhibition in 1867 the reviewer writes as follows : ‘Mons. Schneider et Cie., of the Creuzot Ironworks, exhibited a remarkably well-finished express engine for our Great Eastern Railway ; and it was the sixteenth out of an order for forty engines.’ Elsewhere in the same article it is stated that ‘another locomotive, also built from English drawings, was exhibited by Messrs. Kiessler, of Esslingen, which was an instalment of an order given by the East Indian Railway Company for twenty engines. These two engines afforded incontestable proofs that English designs can be executed abroad as well as at home and at a cheaper rate.’ The reviewer further alludes to the evidence given by Mr. John Robinson, of the Atlas Works, Manchester, who had stated to the Trades Unions Commissioners that the amount of engines supplied by his own firm since 1865 to foreign countries had been constantly diminishing, in consequence of the high rate of wages which he had found it necessary to pay. I have shown that there has been no increase whatever in recent years in the rate of wages paid in England in the trades concerned in the building of locomotive engines ; while, on the other hand, at Mons. Schneider’s establishment there has been an

¹ 1869.

increase during the last fifteen years of thirty-eight per cent. We must not, therefore, look at the increase of wages for an explanation of the reason why we are no longer monopolists of the engine-building trade. The real explanation is to be found in the circumstance that as the railway system was first established in this country, so we were the first in the field as locomotive engine builders. When a supply of rolling stock was required for the service of the Paris and Rouen Railway, the first railway of much importance constructed on the Continent, it was thought necessary to create the special engine-building works already mentioned at Sotteville, near Rouen, for the purpose of building the locomotives and carriages required for the line. A great number of the mechanics employed at the works were Englishmen, and the direction and supervision were exclusively English. And why was it that recourse was had to English experience in this case? Then, as now, labour of all descriptions was not only as cheap, but cheaper abroad than in England. The necessary experience and mechanical skill were not as yet to be found among Continental mechanics. Even now our Continental neighbours would still draw large supplies from England, if they did not protect their own manufacturers by heavy import duties.

It has been said that Belgian rails are being largely imported into England. Some six hundred tons for the East Gloucestershire Railway were supplied by a Belgian firm in 1865. The price of these rails was 6*l.* 10*s.*, delivered at Gloucester. A solitary instance like this proves nothing as to the general comparative prices of English and Belgian rails. It was because our ironmasters were more fully employed than the ironmasters in Belgium, and because the prices of rails had in

consequence fallen more rapidly in Belgium than in England, that the order in question was executed abroad. Since the year 1865 rails have been made in England at a cheaper rate than that paid for the Belgian rails supplied to the East Gloucestershire Railway.

Trades
Unions as
benefit
societies

I have dwelt much on the vain attempts to force up the rate of wages by regulations which tend to destroy the free liberty of the labourer. As benefit societies, the Trades Unions have effected, and are capable of doing, great good to the working people. They encourage a noble spirit of self-help. The Engineers' Society, out of a total income of 49,000*l.* a year, spends but 72*l.* a year in contributing to the support of the members of the Unions who are out on strike. We honour and admire the sentiments of fraternal sympathy, which prompt men to promote each other's advancement in life by that mutual aid and support which these societies are intended to afford.

Coercion
and intimi-
dation

Turning to the law as affecting Trades Unions, I accept the principles recently laid down by the Superior Council of Commerce and Industry in Belgium, as set forth in a memorial addressed to their Government on this question.

'The right of property gives to every citizen the right to regulate the price of his labour. The exercise of this right, in concert with others, cannot make that unlawful which it is lawful for every man to do individually. To prohibit simple combination, in the absence of any attempt to coerce the will of others who have taken no part in the deliberation, is an injustice which the representatives of Belgian labour would desire to see removed from their codes.'

The law as regards the offence of intimidation should be carefully considered. The committee appointed to

inquire into the combination laws in 1824 reported that it was, in their opinion, 'absolutely necessary, when repealing the combination laws, to enact such a law as may efficiently, by summary process, punish workmen or masters who by threats or violence should interfere with that perfect freedom, which ought to be allowed to each party, of employing his labour or capital in the manner he may deem most advantageous.' When we are about to give recognition to the principle of combination, and to protect the funds of those who combine for objects which do not involve a breach of the law, we should take ample security for the protection of workmen from intimidation and persecution.

While I am anxious to grant to the oppressed the ample protection of the laws, I look to the development among the working classes of a more generous tone of feeling towards each other and a more universal sentiment of loyalty and good-will towards their employers, as affording the best security for mutual happiness and prosperity.

Quid leges sine moribus
Vanæ proficiunt ?

Surely it is not chimerical to hope that the spread of education during the last quarter of a century, and the noble efforts, made in Parliament and elsewhere, to enlighten and elevate the people are destined hereafter to produce their fruits in the general recognition by workmen themselves of the free rights of labour.

II

WAGES IN 1873

ADDRESS READ BEFORE THE SOCIAL SCIENCE ASSOCIATION
AT NORWICH, 1873

IN the following address I shall devote myself to the task of reviewing, I hope in an impartial spirit, the most recent phases of the labour movement. The great advance in wages is a conspicuous feature of modern English industry. The long depression following on the panic of 1866 has been succeeded by a period of unprecedented activity in every branch of our export trade. The demands upon the labour market have far exceeded the supply ; and the artisan and labourer have not been slow to take advantage of the situation. Between 1866 and 1869 the value of the exports of the produce and manufactures of the United Kingdom had remained stationary. It rose from 190,000,000*l.* in 1869 to 256,257,000*l.* in 1872. Such a leap was not possible without imposing a strain upon the powers of our labouring population, which must inevitably have led to a material alteration in the rate of wages.

Advance in
wages

It is alleged that the recent advance of wages is attributable to a series of successful strikes. A strike against a falling market is never successful. Trades Unions can only assist the workman to obtain an advance at a somewhat earlier date than that at which the com-

South Wales
strike

petition among employers would have brought about the same result. The strike in South Wales, at the commencement of this year, is a signal instance of the inability of Trades Unions to cope with the superior resources of employers when firmly united together.

It may be worth while briefly to recapitulate the most important incidents of the South Wales strike. In June 1872 the miners had proposed to apply for an advance of 20 per cent. on their wages. They were advised by the executive council of their Union to limit their demand to an advance of 10 per cent. The advance was granted, and three months later the men asked for an additional 10 per cent. Their application was refused, and shortly afterwards the masters gave notice of a 10 per cent. reduction. The men desired that their case should be referred to arbitration. This request was refused by the masters, who were so fully convinced of the strength of their own case that they offered to submit their books for the inspection of the workmen. The miners were unwilling to avail themselves of this offer; and, encouraged by large promises of support from Mr. Halliday and Mr. Pickard, went out on strike.

Without venturing to apportion to either of the contending interests their share of responsibility, it is clear that the ironmasters were alone in a position to know whether their business was sufficiently remunerative to make it possible to dispense with a reduction of wages. It was stated by Mr. Crawshay that he had taken a contract for 2,000 tons of rails at *9l. 2s. 5d.* per ton net, and that he lost money. He expressed an opinion, founded on the statements made by his workmen, that, but for the interference of the Union, they would have been satisfied with the explanations given them, and would have returned to their work. In short, it became

a point of honour with the masters to prove to their workmen that they were able, when acting in concert, to fight a successful campaign against the united forces of the Union.

The miners were in the embarrassing position in which workmen are always placed whenever they are engaged in similar disputes. They had to struggle in the dark, and had no means of correctly estimating the profits of their employers. Heavy responsibility rested on the executive council of the Miners' Union during the labour crisis in South Wales. Although the miners connected with the Union were only 10,000 in number, by their cessation of labour 50,000 of their fellow-workmen, engaged in various branches of the iron trade, were kept out of work. The 'strike pay' distributed by the Colliers' Union amounted to a total of 40,000*l.*, a sum quite insignificant by comparison with the amount of 800,000*l.* which the men would have earned had they continued at work. The burden of sustaining a vast population proved eventually insupportable. The men were only enabled to continue the struggle by the assistance of the tradesmen of the district; and when, at length, the latter found themselves unable to continue the supply of the necessaries of life on credit, surrender was inevitable.

Inter-
national
Society

The reaction against the International Society among the working classes in Belgium originated in a similar cause. In 1871, during the strike in Flanders, the International was unable to fulfil its promises of support. It has consequently lost credit with the operatives, many of whom, as we are informed by Mr. Kennedy, have withdrawn from the society. It was the same with the miners at Waldenburg, in Silesia, where 6,000 men went out on strike. After all their savings had been exhausted,

they received a grandiloquent despatch from the central council at Berlin, urging them to emigrate *en masse*. A few obeyed the advice. The majority who remained were compelled to surrender, being consoled by the assurance that the most valiant armies must sometimes yield to superior numbers, and that they had won for themselves the admiration of Germany.

Almost to the last the originators of the strike in South Wales opposed the generally felt desire to return to work. Never, perhaps, was the magical power of eloquence over an imperfectly educated audience more conspicuously displayed than at the meetings held by the workmen towards the close of the South Wales strike. Men gathered together for the express purpose of negotiating a peace with their employers were turned aside, against their own judgment, by the eloquent exaggerations of orators interested in the continuation of the struggle. Overwhelming indeed is the influence of speech over the uninstructed mind. Well might Carlyle exclaim: 'He who well considers, will find this same right of speech, as we moderns have it, to be a truly astonishing product of ages; and the longer he considers it the more astonishing and alarming. I reckon it the saddest of all the curses that now lie heavy on us.'

In the event, as I have said, the workmen returned to their work on the terms which their masters had originally proposed. Happily they had not long to wait for an improvement of their position. In less than a fortnight after the close of the strike the workmen received an advance of 10 per cent. on the reduced wages.

The defeat of the miners in South Wales offers a new illustration of the inability of workmen to force a con-

Proposal
of the Inter-
national for
a universal
strike

cession from employers possessed of abundant resources, when the state of trade is such that a concession cannot be made without involving the employers in direct pecuniary loss. We have evidence that this fact is becoming generally recognised. The inability of Trades Unions to control the rate of wages was frankly admitted by the members of the International Society in their last congress, when the working men were informed that hereafter, if they wished to secure any substantial advantages for labour, there must be a strike *en masse* of all the working men of every country in the world.

In extreme
cases a
strike may
produce
results bene-
ficial to
workmen

While I feel bound to assure the working man of the certain frustration of his expectations if he seeks to obtain from capital impossible concessions, a strike will sometimes make an impression on employers, even in cases in which the demand for an increase of wages is not immediately conceded. If the trade in which the workmen on strike are engaged is prosperous, for the employer cessation of production means loss of profit. The wage-earning classes may rest assured that, in the long run, and without the assistance of Trades Unions and the disastrous interruptions to their business occasioned by protracted strikes, the competition among employers to secure the services of workmen will infallibly lead to a rise of pay proportionate to the amount of profit derived from the particular industry with which they are connected. It was a noteworthy feature in the South Wales strike that the men never had recourse to physical violence. I attribute their good conduct in this regard in part to the influence of Mr. Halliday and his colleagues.

Orderly con-
duct of men
on strike in
South Wales

Advance
in price of
coal

I now pass to the graver subject of the recent rise in the price of coal. It will be remembered that, on the motion of Mr. Mundella, a Committee of the House of

Commons was appointed in the last Session to inquire into this subject. After a long investigation the Committee reported, as might have been expected, that, in their judgment, the rapid development of the iron industry was the primary cause of the advance in the price of coal. It appears from statistics, compiled under the direction of the Committee, that the total production of coal in 1869 was 107,000,000 tons, of which 79,000,000 were used in manufactures. The total production in 1871 was 117,000,000 tons, of which 85,000,000 were used in manufactures. It will thus be seen how large a proportion of the total quantity of coal raised is consumed in manufactures, and specially in the manufacture of iron. In 1867, 567,000 tons of pig iron were exported, 4,193,000 tons of pig iron were converted into rolled iron, 1,317,000 tons of rolled iron were exported, and 28,331,000 tons of coal were used in the manufacture of iron. In 1872, 1,333,000 tons of pig iron were exported, 5,390,000 tons of pig iron were converted into rolled iron, 2,055,000 tons of rolled iron were exported, and 38,229,000 tons of coal were consumed in the manufacture of iron.

In the evidence which he gave before the Committee, Mr. Lothian Bell stated that the greatly increased demand for the manufacture of iron, although not the sole cause, was one of the causes, of the rapid advance in the price of coal. In his district the iron trade gave a great stimulus to the coal trade. 'But,' he observed, 'all industry throughout the country has been, and still is, in a very flourishing condition. The manufacture of alkali in the North, the increase of railways, the substitution of steam for sailing vessels, all added to demands on an output not very greatly increasing.' It is to be observed that the rise in the price of iron pre-

Mr. Lothian
Bell

ceded the rise in the price of coal. Mr. Lothian Bell quoted figures, from which it appeared that, in September 1871, forge pig iron was selling for 50s., while coke was selling for from 10s. to 12s. a ton. In July 1872, the forge pig iron rose to 120s.—more than double the price of nine months before—and coke, following the advance in iron, rose from 37s. 6*d.* to 41s. a ton.

The Committee rightly observe, in commenting upon these figures that although the disturbance in the proportion between the demand and the supply of coal might not appear sufficient to explain fully the great rise of prices, yet a comparatively small deficiency in the supply of an article of paramount necessity may produce a disproportionate increase of price.

Rise of
wages in
collieries

Other reasons for the rise in the price of coal have been urged, and among these more especially the reduction in the hours of labour, and the great advance of wages. The advance in wages paid to miners is in truth extraordinary. In the case of a large colliery in which I have an interest the advance of some of the principal trades may be given. The weekly wages of hewers in 1869 were 24s. 5*d.*; they have risen in 1873 to 48s. 9*d.* The wages of timbermen in 1863 were 25s.; in 1873 they are 53s. 4*d.* Haulers, in 1869, 20s.; in 1873, 31s. 6*d.* Landers, in 1869, 21s.; in 1873, 36s. 9*d.* Labourers, in 1869, 15s.; in 1873, 24s. a week. The average wages of all the men employed were 20s. 11*d.* for 1869, as compared with an average of 36s. 8*d.* per week in 1873.

In other parts of the country wages have risen, since 1870, 48 per cent. in Northumberland, and 50 per cent. in Durham. The requirements of the Mines Regulation Act have involved an additional expenditure, estimated by some authorities at 12½ per cent. upon the cost of production. It was estimated by Mr. Pease that the

total cost of working, in collieries with which he was connected, had increased 50 per cent. between 1870 and 1872. Mr. A. Macdonald, the President of the Miners' National Association, confirming the opinion of Mr. Pease, estimated that the cost of getting coal in Northumberland had increased, between 1868 and 1872-73, from 60 to 65 per cent., while the selling price had risen 120 per cent.

It might be easily made to appear that the rise of wages was the principal cause of the advance in coal. But the case would be imperfectly presented for examination, if the profit derived from the working of the pits were not ascertained. The colliery to which I have already referred had, for years, been worked at a serious loss—there being no dividend for the proprietors in the years 1870 and 1871. Indeed, the prospects were so gloomy in the latter year, that some of the shareholders in the undertaking made over their interest to their co-proprietors at a considerable discount. In 1872 the tide turned, and an ample dividend was earned.

Increased profits of colliery proprietors

All experience abundantly confirms the opinion expressed by the Committee of the House of Commons, to the effect that the prices of coal, which prevailed for years before the present rise commenced, were so low that they did not afford a reasonable profit to the owners of collieries in general, or such remuneration as the workmen might, with regard to the hazardous and arduous nature of their labour, reasonably expect. The rise in the rate of wages has not, under the exceptional circumstances, been unreasonable. The real order of events has been, first, the rise in the price of iron, then a rise in the price of coal, and lastly a rise in the rate of wages. It is a question whether the last two years have compensated

Rise of wages has followed advance in price of coal

the coal-owners for the former protracted era of stagnation, and, in many cases, of serious loss.

In a letter addressed to the 'Times,' early in the present year, in which the case of the masters was ably argued, Mr. Laing narrated the history of the Blaenavon Company. Owing to various causes, that concern had been worked for several years without profit. Only within the last three years had it become a profitable undertaking; and yet all through a long period of adversity 3,000*l.* to 4,000*l.* a week were paid in wages, at the same rate as by the most prosperous iron works. The capital sunk by the original proprietors was the means of creating a town, and supporting a population of 9,000, in a secluded mountain valley of South Wales.

The present unprecedented prosperity may continue for a year or two years at the most. The influx of capital into the coal trade, attracted by the present high profits, will infallibly lead to some reduction of price. New coal pits are being sunk. Old pits are being improved. More workmen are being trained in the business of mining. We may look with confidence to an augmentation of the output, and to a sufficient supply for the ordinary demands of consumers. The insufficient profits of former days cannot be attributed to the unreasonable standard at which wages were maintained. The excessive competition in the supply of coal was the true cause of the unfortunate position of the trade. And as in the former period of depression, so in the sudden and it may be short-lived prosperity of the present day, the rates of wages must be regarded, not as a cause, but as a consequence, of an abnormal position of affairs.

Complaints have been urged as to the effects of shortening the hours of labour. If a comparison be

Causes
which will
lead to a
reduction
in price of
coal

made between the amount raised and the total number of individuals employed, a less quantity is raised than in former years. High wages have attracted many untrained hands to the coal pits. It would be presumptuous to express an opinion as to the precise number of hours which would constitute a fair working day in a coal pit. Mr. Macdonald, who has had actual experience as a working miner, declares that the present earnings could not be obtained with less than eight hours of work a day, and that no man who laboured assiduously for that number of hours could work continuously six days a week at coal mining. It will be the duty of those to whom the miners are in the habit of looking for guidance to watch with care the course of trade. They know that the iron manufactures of this country can only prosper so long as we are able to sell our iron abroad at cheaper rates than those demanded by foreign producers.

There are some who think that a limitation of the hours of labour is in itself an evil. I cannot share in this view. Because some may make an unwise use of their newly acquired advantages, that is no reason for returning to a former state of things, when, in the general depression of trade, an undue pressure was brought to bear upon the working man. 'No doubt,' says Sir Arthur Helps, 'hard work is a great police agent. If everybody were worked from morning till night, and then carefully locked up, the register of crime might be greatly diminished. But what would become of human nature? Where would be the room for growth in such a system of things?' The use of leisure requires education, and that education has not been given to the mechanics, miners, and puddlers, of former generations.

Various proposals have been made for maintaining



The double
shift system

the production of collieries, while conceding to the workman the advantage of a reduction in the number of hours of daily labour. Among these, the double-shift system of working promises a satisfactory result. When the memorable struggle was commenced in Newcastle for a reduction in the number of hours, I ventured to suggest, in an address delivered at Birkenhead, that the solution of the difficulty which had arisen in the engineering establishments might be found in employing relays of mechanics to succeed each other at the same machine. Where we have to combine human labour with mechanical power, it is impossible for the human machine to keep pace with machinery of brass and iron. But why should not a machine, which never tires, be tended by two or three artisans, relieving each other as one watch relieves another on board ship? In driving the machinery of steamships, it has been found necessary on long voyages to have three watches of engineers and firemen. Why should not the day be divided into three periods of eight hours, or the working day be extended to sixteen hours, two sets of men being employed? The change arising from the increasing use of machinery seems to render corresponding modifications in the application of labour essential. My friend Mr. Elliott is pushing the system of a succession of labour in collieries, with advantageous results to all parties concerned. Comparing a Durham colliery, worked on the double-shift system, with a colliery in Glamorganshire, worked by one set of miners, he ascertained that twice the quantity of coal per day was being raised in Durham. The prejudices of the miners in South Wales against the double-shift have presented a serious obstacle to its introduction. Mr. Elliott hopes that objections may eventually be overcome by the influence of Mr. Macdonald and other

representatives of the men, whose superior intelligence will enable them to appreciate more readily the advantages of new and improved systems of working.

Among various improvements, which may tend to reduce the price of coal, we may look with confidence to the increased use of coal-cutting machinery as a substitute for manual labour; and to the discovery of methods by which the consumption of fuel may be reduced. The experiments with the machines invented by Captain Beaumont, R.E. and others have been eminently satisfactory. These machines are now being made in large numbers in Glasgow and Birmingham.

Coal-cutting
machines

Our domestic consumption is undoubtedly wasteful. The inventor of an effective improvement in the form of grate now in common use will be a real benefactor to his fellow-man. Already we have, in the cooking stove for yachts, invented by Mr. Atkey, of Cowes, a highly successful apparatus. A letter from Mr. Vale, ex-President of the Liverpool Architectural Society, addressed to the 'Times,' describes a cooking stove for a party of nine persons and a crew of thirteen men, which measured only one foot four inches by one foot four inches in area, and one foot nine inches in height, the actual fuel space being less than one cubic foot. The fuel required in Mr. Vale's yacht for one day's consumption was forty-seven pounds of coke, at twenty shillings a ton, and the cost per head per day amounted to less than one farthing.

Waste of
coal in
domestic
consumption

In his lecture, delivered at Bradford during the meeting of the British Association in the present year, Mr. Siemens described Captain Galton's ventilating fireplace as a most valuable invention. 'The chief novelty and merit,' he said, 'of Captain Galton's fireplace consists in providing a chamber at the back of the grate,

Captain
Galton's
fireplace

into which air passes directly from without, becomes moderately heated (to 84° Fahr.), and, rising in a separate flue, is injected into the room under the ceiling with a force due to the heated ascending flue. A plenum of pressure is thus established within the room, whereby indraughts through doors and windows are avoided, and the air is continually renewed by passing away through the fireplace chimney as usual. Thus, the cheerfulness of an open fire, the comfort of a room filled with fresh but moderately warmed air, and great economy of fuel, are happily combined with unquestionable efficiency and simplicity ; and yet this grate is little used, although it has been fully described in papers communicated by Captain Galton, and in an elaborate report made by General Morin, le Directeur du Conservatoire des Arts et Métiers of Paris, which has also appeared in the English language.'

Mr. Bes-
semer's in-
ventions

Economy in the consumption of coal for the manufacture of iron is a far larger question than economy, however desirable in itself, in the consumption for domestic purposes. As an illustration of what may be achieved in this direction, I will quote some extracts from a letter from Mr. Bessemer, detailing the results which have actually been attained through his most valuable discoveries.

'The average quantity of coal required to make a ton of pig iron is about two tons of coal to a ton of pig ; and, as pig iron forms the raw material for the several processes of manufacturing both malleable iron and steel, we may treat the pig simply as the raw material employed, and consider only how much coal is required to make a ton of finished rails. About two tons of coal are required in order to convert pig iron into iron railway bars. To produce one ton of steel rails by the old

process of making steel in Sheffield, a total consumption of 10 tons 8 cwt. of coal is required; and the conversion of iron bars into blistered bars occupies from eighteen to twenty days. To make Bessemer's steel from pig iron into steel rails requires about 5 cwt. of small coal, in the form of coke, to melt the pig iron in the cupola; 2 cwt. to heat the converting vessel and ladle; 2 cwt. for the blast engine, which converts five tons of pig iron into fluid cast steel in twenty minutes; and, lastly, for rolling the ingots into rails, 16 cwt. of coal, making a total consumption of 25 cwt. of coal in producing one ton of Bessemer's steel rails from pig iron. Thus, common iron rails take two tons of coal; Sheffield cast steel rails, 10 tons 8 cwt.; Bessemer's steel rails, 1 ton 5 cwt. We must consider other points in connection with these figures, in order to arrive at a correct estimate of the saving of coals effected by the introduction of steel as a substitute for iron.

'Although the cost of Sheffield steel entirely shut it out of the market for rails, it must be borne in mind that it was extensively used for wheel tires, slide bars, piston rods, and other parts of locomotive engines. Here a saving of over nine tons of coal per ton of steel has been effected. Further, it must be borne in mind that at stations where rails are rapidly worn the saving by the use of steel, as a substitute for iron, must not be simply estimated as a saving made on one ton of each material. For instance, at the London and North-Western station, at Crewe, the iron rails are so rapidly worn that they require to be reversed every four months, each rail being completely worn out in eight months. Bessemer's steel rails were first used at this station, and after being in constant use for seven years, they were removed in consequence of rebuilding the station, one

side only of the rail having been used, and this was not quite worn out. During the seven years, therefore, that those rails were down, 1 ton 5 cwt. only of coal had been employed in the production of each ton of rails used at this station; whereas ten sets of iron rails would have been entirely worn out in that period, each set consuming two tons of coals in its manufacture, or equal to twenty tons of coals for iron rails, as against 1 ton 5 cwt. of coals for steel rails; and these, when turned, would be equal to another seven years' wear on the side not used. The above is, no doubt, an extreme case, but the same thing goes on everywhere where steel is used, though in a lesser degree. It has been admitted by competent persons that the rapid destruction of iron rails would have caused a complete collapse of the metropolitan railways, by continued interference with the traffic while removing the worn-out rails, had not steel been employed. The extra strength of steel over iron admits of a reduction of one-third of its weight in all structures previously made in iron. Thus, a further saving is effected in the fuel consumed for a given work. The rapidity with which Bessemer's steel is coming into use will be appreciated when it is stated that the report of the jury at the London International Exhibition showed that the entire production of steel in Great Britain, prior to Bessemer's invention, amounted to 51,000 tons per annum; while the quantity of Bessemer's steel made in Great Britain during the twelve months ending June 1873 amounted to 481,000 tons, or nearly ten times the amount of production prior to the invention. Had this quantity of steel been made by the old Sheffield process, it would have consumed, according to the foregoing figures, 4,401,000 tons more coal than was actually employed in its production. Should this enor-

mous increase in the manufacture continue, as it at present promises to do, in another five years we may have treble the quantity of steel made in this country with a corresponding saving of fuel.'

In steam vessels a remarkable economy of fuel has of late been attained. In his lecture at Bradford, Mr. Siemens said: 'A striking illustration of what can be accomplished in a short space of time was brought to light by the Institute of Mechanical Engineers, over which I have at present the honour to preside. In holding their annual general meeting in Liverpool, in 1863, they instituted a careful inquiry into the consumption of coal by the best engines in the Atlantic steam service, and the result showed that it fell in no case below $4\frac{1}{2}$ lbs. per indicated horse-power per hour. Last year they again assembled, with the same object in view, in Liverpool, and Mr. Bramwell produced a table showing that the average consumption by seventeen good examples of compound expansive engines did not exceed $2\frac{1}{4}$ lbs. per indicated horse-power per hour. Mr. E. A. Cowper has proved a consumption as low as $1\frac{1}{2}$ lb. per indicated horse-power per hour in a compound marine engine constructed by him with an intermediate superheating vessel. Nor are we likely to stop long at this point of comparative perfection. I have endeavoured to prove that theoretical perfection would only be attained if an indicated horse-power were produced with $\frac{1}{5}\frac{1}{5}$ lb. of pure carbon, or say $\frac{1}{4}$ lb. of ordinary steam coal per hour.'

Reduced
consumption
of coal in
steamers

The furnace invented by the Messrs. Siemens is a highly successful contrivance. In melting 1 ton of steel in pots, $2\frac{1}{2}$ tons of coke are ordinarily consumed. In Messrs. Siemens' furnace, a ton of steel is melted with 12 cwt. of small coal. When such results as this have

Inventions
of Messrs.
Siemens

been secured by a few inventors, what may we not venture to expect from the concentration of many ingenious minds on the important problem of economising coal ?

General
prospects
of the iron
trade

It remains to consider how far the apprehensions entertained in many quarters for the future of the British iron manufacture are justified by actual experience. When we look back upon the past, the growth of British commerce cannot fail to reassure those who are most inclined to look doubtfully on the future of our industry. Our exports of iron in 1840 amounted to 268,000 tons, of the value of 2,526,000*l.* The quantity in 1850 was 783,000 tons ; in 1860, 1,442,000 tons ; and in 1870, 2,716,000 tons. The value in the latter year amounted to 21,080,000*l.* In 1872 the quantity was 3,383,000 tons, of the value of 36,000,000*l.* We are sometimes assured that Belgium threatens our ironmasters with serious competition. In Belgium the ore must be carried 100 miles or more to be smelted. The coal pits are worked in many cases with considerable difficulty. A Belgian workman does little more than half what an Englishman can accomplish in the same space of time. Sometimes we are told we shall lose our position in the Russian market. The Russian Government are doing their utmost to encourage the manufacture of iron at home ; though there is little demand for pig iron in that country. Few Russians have had any experience in puddling. Skilled mill and forge men are scarce. Few of those obtainable have had any experience in the use of mineral fuel, and great difficulty is experienced in consequence of the objection of the Russians to piecework. Lastly, we are threatened with competition from the United States. The production of pig iron in the States may now be estimated at

2,500,000 tons, an increase of 1,000,000 tons on the production five years ago ; and yet the ironmasters of the United States, who are protected by a duty of nearly 3/4. a ton on railroad iron, have hitherto been unable to supply the entire demand at home. There cannot be a doubt as to the ultimate consequences of the comparative exhaustion of our supplies of raw material at home ; but we may hope that the tariffs, which now throw obstacles in the way of legitimate trade, will in time be removed, and that, as Mr. Mattieu Williams has suggested, we may be enabled to avail ourselves of the natural resources of America for obtaining our supplies of raw material, just as we already derive large supplies of hematite iron ore from Bilbao.

At the present time, the United States, not content with their natural advantages, impose an almost prohibitory tariff on our exportations. There is a party in America opposed to protection, but hitherto the superior organisation and greater determination of the manufacturers interested in the maintenance of the tariffs has overpowered all opposition. At the last annual meeting of the American Institute of Mining Engineers at Philadelphia, the Honourable D. Kelley, who delivered the opening address, asserted that, by its dereliction of duty in not protecting the labourer of Great Britain against competition, the Government of this country has fostered anarchy in Ireland, while the life of the labourer in England and Scotland has been robbed of all its joys. 'The millions of sturdy men,' he declared, 'represented by Bradlaugh, Odger, Joseph Arch, and the travelled and humane patrician, Sir Charles Dilke, know that the world owes every man a living, and that it is only by protection that the means of living can be secured to the people.' So long as such a feeling pre-

American
competition

vails, there is little hope of our ironmasters obtaining free access to America.

The progress of the American iron works is the more creditable, because great difficulties are experienced in obtaining a sufficient supply of labour. Men come over from England, having had their expenses paid, on condition of taking an engagement for a period of five years. As soon as their bargain is performed, they find it impossible to resist the attractions of an independent farm in the Far West. Their places must be supplied by other workmen, recruited by the same costly means from the mother country. The difficulty of obtaining skilled workmen has had a great effect in America in stimulating the invention of labour-saving machinery. As scientific manufacturers, the American ironmasters can doubtless hold their own against the world. In finished iron the Americans have been highly successful. Bridgework, locomotives, wheels and tires, and machinery, are produced at prices which may compare not unfavourably with our own. As an illustration of American ingenuity and enterprise, which came under my immediate notice on the occasion of a recent visit to the States, I may point to the Peabody Rifle Company's establishment at Providence, Rhode Island. During the Rebellion the Company was fully employed in the manufacture of small arms. The cessation of the struggle put an end to the demand for rifles. With the fertility of resource which distinguishes American industry, the manual skill of a large body of workmen especially apt in the production of tools or machinery composed of numerous small and interchangeable parts, and the valuable and ingenious plant belonging to the Company, are now employed in the production of sewing machines. Three hundred machines are turned out every day, and the sale is con-

stantly increasing. The wages of the 500 operatives employed are most liberal. The monthly pay sheet amounts to 25,000 dollars, giving an average of 40s. a week throughout the factory. The leading workmen, five or six in number, to whom the work is let by the piece, or rather by sub-contract, earn nearly 600*l.* a year. The superior mechanics earn 12*s.* to 14*s.*, labourers 4*s.* to 6*s.* a day. The supply of highly skilled labour is limited, but ordinary mechanics can always be obtained. On an average, one skilled mechanic a day makes application for employment.

The success of the Peabody Company affords significant evidence that the cost of production is not augmented in equal proportion to the high rates of pay. At the time of my visit, they were negotiating a contract for the supply of 100,000 rifles to the Roumanian Government, at the rate of 63*s.* per rifle; and they had to compete for the contract against all the makers of Birmingham and Liège. This Company had in prospect a large order for 200,000 rifles, from the Turkish Government. The success with which the Americans have reduced the cost of production by the invention of machinery gives us ground for caution lest our old supremacy be shaken by the energy and talent of the New World. At the same time we have reason to hope that the effects of the exceptionally high rates of wages now prevailing may be mitigated by substituting, as far as possible, mechanical for manual labour.

In the present condition of our trade, there is nothing to justify serious misgivings as to our power of continuing a successful competition with foreign producers. It does not follow that, because we have lost a monopoly of a particular branch of trade abroad, the skill of the English workman must have deteriorated, or the cost

A monopoly
of the iron
trade impos-
sible

of production have been unduly enhanced by the rise of wages. Foreign countries may have imported from us a particular commodity at a former time, solely because they were entirely inexperienced in its manufacture. When my father was executing the Rouen and Havre Railway, he imported the rails from England, although he had to pay an import duty at the French custom house amounting to a considerably larger sum than the selling price of the rails at home. The almost incredible difference between the price of English and French rails at that time no longer exists. That most important branch of industry is now as well understood in France as in England. So, too, in the case of the employment of English contractors for the execution of public works on the Continent. An opportunity was offered to men of enterprise in the origin of the railway system on the Continent ; because in those early days of railways there were no native contractors sufficiently acquainted with the art of making railways to compete with the English invaders. Their intelligent observation of our methods of construction soon enabled the contractors on the Continent to tender in competition with the English, and for many years past all the railway works in France have been carried out by Frenchmen. It does not follow that the English contractor has lost his former skill. The true inference is, that the French, who had been previously in a position of inferiority solely from lack of experience, were enabled, as soon as they had gained that experience, to execute the works required, without the assistance of foreigners.

Exports of
iron and
steel to
France

The development of our commercial relations with France, since the negotiation of the Treaty of Commerce, affords convincing proof of the great capabilities of our manufacturing industry. Since 1860, the exportation of

iron, wrought and unwrought, to France has increased in value 540,000*l.* Looking to the present condition of our iron trade, there is nothing to justify serious misgivings. According to the last report of the Commissioners of Customs, the average value of the pig iron exported in 1870 was 2*l.* 19*s.* 2*d.* per ton ; in 1871, 3*l.* 1*s.* 8*d.* ; in 1872, 5*l.* 0*s.* 11*d.* ; and yet the demand for pig iron continued unchecked. The increase in the quantity exported in 1872 over 1871 was 28 per cent. The increase in the price ranged as high as 108 per cent. While the export of pig iron attained to the figures I have quoted, the total increase in the exports of iron and steel manufactures did not exceed 6·7 per cent. Indeed, the manufacture of steel actually fell off from a value of 683,000*l.* in 1871, to 623,000*l.* in 1872 ; a result the more remarkable as compared with the increase in pig iron, because the price of steel had not advanced in the same proportion as the rise in pig iron. The price of the latter article had risen, as I have said, from 3*l.* 1*s.* 8*d.* to 5*l.* 0*s.* 11*d.* per ton ; while unwrought steel had only advanced from 30*l.* 12*s.* 3*d.* to 32*l.* 18*s.* 7*d.* per ton, and steel manufactures from 52*l.* 8*s.* 1*d.* to 55*l.* 4*s.* 10*d.* per ton.

A demand once created for an article of the first necessity, such as iron, is not easily checked, even by an advance of price. When, however, the course of trade has been changed, and consumers, alarmed by the high prices in our market, have been taught to look for their supplies in another, the position once lost is not easily recovered. The superiority of our artisans in skill and industry has assisted our manufacturers to compete successfully in the past. The same result will not be attained in future, unless our employers and work

men continue, as before, to use their united efforts to reduce the cost of production.

Hours of
labour in
the ship-
building
trade

Perhaps no branch of industry has been more successfully prosecuted in this country than shipbuilding ; and the extensive use of iron for ships of the largest type makes it a point of great interest to ascertain how far the cost of building ships has been affected by the recent advance of wages. I am informed by an eminent firm of shipbuilders, that at the close of 1871, shortly after the reduction in the hours of labour from fifty-nine or sixty hours a week to fifty-four, an agitation was commenced amongst all classes of men for an advance in their rates of wages, which has been, in some shape or other, conceded to them, to the extent of from $7\frac{1}{2}$ to 15 per cent. In reality, this was the natural consequence of the reduction in the hours of labour ; although at the outset the leaders of that movement professed that they had no desire to raise the rates of wages.

The reduced hours of labour increased the cost of production of all articles, and led to the necessity for an advance in the rates of wages. In point of fact, the advantage of the reduction in the hours of labour being conceded, on social and moral grounds, the necessity for some corresponding advance in wages followed as a matter of course, and was perhaps not unreasonable. The two causes combined have resulted in an increased cost of production, so far as labour is concerned, of from 20 to 25 per cent. The cost of building first-class steamers and first class marine engines has, in consequence of the rise in wages and materials, been increased from 30 to 40 per cent. The actual diminution, by the nine hours' movement, in the amount of work turned out with a given plant should, in theory, be only in proportion to the reduced number of the hours of work, or,

say, about one-tenth. It is in reality from 15 to 20 per cent.

From an eminent firm on the Clyde, I learn that on riveters' and smiths' piecework there has been an increase of 20 per cent. and 10 per cent. respectively, in the last two years. On the other hand, in fitters' piecework wages show a decrease of 10 per cent. The price of first-class steamers in 1871 was about 24*l.* per ton. At present the cost would be from 30 to 35 per cent. higher. While the building of sailing ships decreased in 1871 and 1872, in 1873 the number built has increased. The building of steamers has not been so brisk in 1873 as in 1871 or 1872; a marked falling off in orders having taken place since the beginning of this year.

On the Thames, piecework is at least 15 per cent. dearer now than in 1869 and 1870. The operatives employed in attending to large self-acting machines requiring little manual labour are only working fifty-four hours instead of sixty hours. Overtime has increased since the nine hours' movement commenced. Wages for overtime are higher than for ordinary time. An hour and a half's pay is given for every hour's work, and many men refuse to work unless a certain amount of overtime is given to them.

With these recent reports from shipbuilders it may be useful to compare the general progress of shipbuilding in the United Kingdom, in the last ten years. The tonnage of the ships built rose from 328,000 tons in 1867 to 475,000 tons in 1872. The registered tonnage has not increased in the interval, but the vast increase in the proportion of steam to sailing vessels will fully explain the apparently stationary condition of the mercantile marine, if tested solely by the amount of tonnage. It is equally reassuring to find that, in the estimation of

Ship-
building in
the United
Kingdom
during past
ten years

foreigners best qualified to form an opinion, the extent of our merchant navy excites profound admiration. M. Bal, director of the Bureau Veritas, in giving evidence before the French Parliamentary Commission of Inquiry into the condition of the French Mercantile Marine, said that to him it seemed almost incredible that England, which has only 27,000,000 inhabitants, had 6,903,000 tons of shipping, whereas all the other maritime Powers combined had only 6,648,000 tons.

In the United States, until the quite recent, and still but partial, revival of the trade, the decline of shipbuilding had been remarkable. In a country possessed of less natural resource, the suffering which would have been entailed on the particular industries concerned would have been almost insupportable. According to Mr. Wells, 15,000 men were employed in New York, in 1860, in building and repairing marine steam engines. In 1870, fewer than 700 found employment in the same branch of industry. In France, it would seem, from the report of Mr. West, that a wooden ship costs from 3*l.* to 4*l.* a ton more than a similar ship built in England or Canada; and in regard to iron steamers, the price of wrought iron in France for shipbuilding purposes is so much higher than in England, as to make competition impossible. Amid the many difficulties of the present time, English employers may perhaps take comfort by looking abroad, where they will generally find that the same problems with which they have to deal are presenting themselves, and often in a still more aggravated form.

Passing from shipbuilding to engineering, in an establishment on the largest scale, in which the cost of production has been minimised to the utmost, the increased cost of production in 1871 over 1870 was, for wages, 2·73 per cent., and for materials, 2·59 per cent.

Ship-
building in
the United
States

The en-
gineering
trade

Again, the increase in 1872 over 1871 was, for wages, 7·97, and for materials, 7·94 per cent., thus showing that the most liberal application of capital, the most ingenious machinery, and skilful administration, had failed to compensate for the great advance in the rate of wages.

I may also quote the following details from a report received from an engineering establishment with which I am connected.

‘The average wages of some of the most important trades in our employ in 1871, 1872, and 1873, were as follows :

Trade	Year 1871		Year 1872		Year 1873	
	s.	d.	s.	d.	s.	d.]
Fitters	29	0	30	0	33	0
Turners	30	0	31	0	34	0
Planers	24	0	25	0	28	0
Slotters	24	0	25	0	28	0
Drillers	20	0	21	0	23	0
Moulders	34	0	34	0	36	0
Dressers	24	0	24	0	26	0
Coppersmiths	32	0	33	0	36	0
Smiths	31	0	32	0	35	0
Strikers	19	0	20	0	22	0
Pattern makers	31	0	33	0	36	0
Joiners	30	0	31	0	34	0
Carpenters	42	0	42	0	42	0
Painters	29	0	29	0	32	0
Platers (boiler makers)	34	0	34	0	36	0
Riveters	28	0	30	0	32	0
Holders-up	24	0	24	0	26	0
Platers (ship yard)	35	0	35	0	36	0
Riveters	30	0	30	0	30	0
Holders-up	23	0	23	0	24	0
Labourers	18	0	18	0	20	0

While wages have considerably advanced, no increased activity on the part of the men has taken place. Indeed, less work is performed in nine hours now than formerly, when ten hours constituted an ordinary day's

Effects of
the rise of
wages

work. The rise of wages has been considerable in the last two years. The price of locomotives has, in consequence of these various causes, increased from 25 to 30 per cent. An ordinary passenger engine, which might have been built in 1871 for 2,200*l.*, cost in 1872 2,400*l.*, and in the present year the price would be 2,600*l.* In modern marine engines the cost of materials and labour is about equal. An engine which might have been built in 1871 at 40*l.* per horse-power, would have cost in 1872 46*l.* In the present year the price has advanced from 55*l.* to 60*l.* per horse-power. In one of the largest steel and iron works in the North the wages of skilled hands are now from ten to sixteen shillings a day, and have increased 25 per cent. since 1870. Lastly, I am informed that there is no appreciable difference in the dress or appearance of the working man, that there is more money and more time spent in the public-house, and that time in the morning is not so well kept now as it was before the nine hours' movement commenced. It is suggested that the improvement in wages and the shortening of the time came too suddenly upon the working man.

While it is evident that the experiences of employers are not always reassuring, there is no ground for general discouragement as to our mechanical industry. The value of our exports of steam engines in 1866 was 1,760,000*l.*; in 1872, 2,995,000*l.* The value of our exports of machinery of other sorts was, in 1866, 2,998,000*l.*; in 1872, 5,606,000*l.* The past has been prosperous, and there is no reason why a cloud should overshadow the future of our industry, if only the time-honoured rule be observed of giving a fair day's work for a fair day's wages.

I now proceed to examine the situation of affairs among our Continental rivals. Valuable materials for

such investigation are furnished to our hands by the recently published reports of our Secretaries of Legation, and by a most important pamphlet prepared by Mr. Redgrave. From these authorities we learn that, in the last ten years, wages at Verviers, a great centre of industry in Belgium, have gradually increased by 20 per cent. and that the working hours are shorter than formerly. At Ghent the rate of wages has risen 60 per cent. in the last fifteen years. The average prices of the necessaries of life show an increase in Belgium of 50 per cent. in the last thirty years. Beef and mutton are now 8*d.* per pound, and bread is about 8*d.* the four-pound loaf. The rise of wages has, however, been greater in proportion than the increase in the cost of lodging, clothes, and food.

Rise of
wages on
the Conti-
nent

In Prussia, Mr. Plunkett states that there is a universal tendency to reduce the hours of labour and to raise the rate of wages. The Breslau Chamber of Commerce reports that, in consequence of the increased cost both of labour and raw material, the prices of cotton carded yarn had advanced 10 per cent. on the best and 16 per cent. on the ordinary qualities. In the Silesian cloth trade, in 1871, prices rose 15 per cent. In the spinning and weaving factories in Silesia, according to a statement by Dr. G. Reichenheim, quoted by Mr. Plunkett, the increase in the rate of wages in the last ten years has been about 30 per cent. for female weavers, while in the case of male labour it is more than double. The same complaints are made which we hear in this country, as to the effect of higher pay in rendering the operatives less careful in their work, and more insubordinate than formerly.

The most recent inquiries tend to establish that underpaid labour is by no means the most economical. It

Low wages
and cheap
production
not con-
vertible
terms

does not follow that, when a workman receives more pay for exactly the same amount of labour, there is no increase in the cost of production. It would be absurd to put such an interpretation on the axiom assumed by my father, when estimating the cost of work, that the cost of labour in a fully peopled country was, as a general rule, the same, whatever might be the nominal rate of daily wages. But where the principle of payment by the piece is adopted (and no other system of payment can be really equitable), there it will be found that labour, when stimulated by a liberal reward, is far more productive than that of the ill-paid operative. The reports to which I have referred are full of illustrations on this point.

Belgium

In Belgium, all the factory occupiers are of opinion that the English operatives are far superior to the Flemish. An Englishman, being better fed, possesses greater physical power, and produces as much work in ten hours as a Fleming in twelve. Understanding the machinery in which he works, he can point to the cause of an accident, whereas in Ghent half an hour is constantly lost in seeking for the reason of a stoppage. Although the rates of wages are lower and the hours of labour longer, English manufacturers have thus but little to fear from Belgian competition.

Russia

Mr. Egerton states that in Russia thirteen hours is the average length of the working day, children generally working the same time as men. Mr. Gosling says

Switzerland

of the Swiss workman that he is inferior to the British workman in physical strength and energy. The French

France

manufacturers insist strongly on the greater cost of production in their country as compared with England. They estimate the cost of wages per week for the hands employed upon 10,000 spindles at 59*l.* 10*s.* as compared with 41*l.*, which would be the corresponding amount in

an English factory. 'The value of the English workman,' says Mr. Redgrave, 'still remains pre-eminent, although the interval between him and his competitors is not so great as it was; he has not retrograded, but they have advanced.' We see too much of intemperance in England, but there is great reason to complain in Belgium and the manufacturing districts of France, where the cheapness of intoxicating liquors is a fearful temptation to the working classes.

The progressive development in the skill of our factory operatives has been clearly shown in the comparison, instituted by Messrs. Bridges and Holmes, of the tasks now performed, with the amount of work allotted to the hands, as ascertained by the Factory Commission of 1833. Messrs. Bridges and Holmes estimate that the proportion of spindles in 1833 was 112 to each hand, while the corresponding number at the present day would be 517 spindles. The speed of the mule has been so much increased, that more stretches are now made in $10\frac{1}{2}$ hours than formerly in twelve. In 1848 a female would have had only two looms; now she will attend to four. The speed of the power looms in 1833 varied between 90 and 112; it now varies between 170 and 200 picks a minute. Notwithstanding all the improvements of mechanism, the cotton weaver of the present day is subject to a greater strain than his predecessor of forty years ago. From a consideration of all these facts, we have reason to congratulate employers in England on the possession of a body of workmen superior to those of any other country. We may also assert, on their behalf, that in no other country of the Old World is the same solicitude displayed for the welfare of the workmen.

Increasing
production
with the
same num-
ber of hands

We must all regret the frequently repeated mani

Relations of
working
classes and
employers
on the
Continent

festations of disaffection on the part of the working classes on the Continent towards their employers. In his able report on the condition of the industrial classes in France, Lord Brabazon quotes some painful illustrations of the entire want of confidence between class and class in that distracted country, where 'Communitic principles have done so much to alienate the affections of the workmen from their employers,' and where a large proportion of those engaged in manufacturing industry live in a condition of wretchedness and misery of which it is certain that few of those who can command regular employment in this country have any experience. At Elbœuf we are told of a certain manufacturer who, during the period of dearth, bought a large quantity of provisions, with the view of reselling them to his workmen at a low rate, but who was obliged to renounce his humane project, because the workpeople imagined it was a pretext for making money out of their misery. At Lyons, where no social distinctions keep asunder the numerous small employers from the employed, the sympathy which formerly existed between the owner of the loom and his assistants is no longer found. It is a relief to turn from this gloomy picture to those bright recollections, the most precious portion of the heritage which I have received from my lamented father, and call to mind the cordial relations which he always preserved with vast multitudes of workmen, and with a large staff of agents of every grade and disposition of mind. Still more, when I see among contemporary employers so many evidences of the same success in conciliating their dependents, I thank God from the bottom of my heart that I was born an Englishman.

While in England we are happily doing away with the great evil of employing young children in our fac-

tories, all the Chambers of Commerce in Belgium unite in deploring the increasing moral and physical degeneracy of the working classes, owing to the premature employment of children. In the Belgian factories for spinning and weaving flax, cotton, and wool, children from ten to twelve years old are very generally admitted, and work twelve hours a day. In the Belgian coal pits 8,000 children under fourteen years of age, of both sexes, are employed. Of children between ten and twelve, 2,400 are employed, 700 above and 1,700 below ground. In 1866, out of their total population of 4,827,000, more than one-half were unable to read or write. The necessity for the employment of children is best proved by the description given by Mr. Kennedy of the position of the Belgian operatives at Alost and Tirmonde, where a first-class hand earns 28*l.* a year, while the smallest sum on which a man can exist is 20*l.* a year. Indeed, existence is only made possible by the employment of children in factories, and by the possession of a small garden in which vegetables are raised.

Employment of children in Belgium

In the English factories, where a larger proportion of women are employed than in the factories abroad, it has recently been proposed that the number of hours of labour should be limited by law. The proposal is supported by Messrs. Bridges and Holmes, on the ground that, by exciting a spirit of rivalry between them, women can be goaded on to over-exert themselves in a manner which would not be observed among men. A woman, we are told, who can mind four looms without an assistant has a certain position, and becomes an object of attention. 'Hoo's a four-loomer; hoo's like to be wed,' will be commonly remarked of such a one. The Association of Employers, though differing on almost every other subject from Messrs. Bridges and

Employment of women in England

Holmes, suggest that women should be excluded from factories for three months after their confinement. Great evils have been found, by experience, to ensue from the too early return of the mothers to factory labour. Let us venture to hope that another Session of Parliament will not be allowed to pass by without placing on the Statute Book a legal prohibition against a practice which is universally condemned by those most competent to form an opinion.

Shorter
hours of
labour

The demand for a reduction of the hours of labour, which has been so strongly and successfully urged by certain classes of our operatives, is not universally supported either at home or abroad. The average length of a working day in Switzerland is twelve hours, exclusive of the time for meals. The general tendency is to a reduction of hours, and laws have been passed limiting the length of the working day in some cantons to twelve hours. These changes are, however, almost entirely due to the efforts of local politicians. A proposal of this nature recently made in Zurich, and sanctioned by the Cantonal Legislature, was eventually thrown out by the popular vote. At Rouen, Mr. Redgrave found no strong desire for a diminution of the hours of labour in the cotton factories. The operatives were chiefly solicitous for a rise of wages. On this subject the workpeople of all countries seem to entertain similar views. Messrs. Bridges and Holmes, in their report on the condition of operatives in English factories, say that the workpeople are by no means unanimous. Among the women especially, many are apathetic, and some are positively opposed to a limitation of the working hours. In the United States, at Lowell, near Boston, I ascertained by personal inquiry on the spot, that the working hours were sixty per week, and that no indication had

yet been given of a disposition among the operatives to reduce the hours.

There may be reason to regret that the working classes have not reaped more substantial and universal benefits from the recent additions to their wages. It is not possible that the industrial population can advance in culture and civilisation if the whole of their physical and mental energies are absorbed in the earning of wages.

Decline of
pauperism

In examining the various circumstances which tend to raise the price of labour in England, the prevailing high wages in the United States, and the increased facilities for emigration, must ever be kept in view. The nominal rate of wages in America may indeed frequently convey a delusive idea of prosperity; yet it cannot be doubted that the thrifty, skilful, and industrious artisan has large opportunities of advancement in the New World. A great majority of the emigrants go out to join some friends already satisfactorily established. When this is not the case, it is essential to the emigrant's success that he should have accumulated not merely a sufficient sum to defray the cost of his voyage across the Atlantic, but enough to enable him to travel, if necessary, far into the interior, and to visit, it may be, several rapidly rising cities in the West, before finally settling down. The artisan who is able to maintain himself for some months after landing at New York, and to make a wide exploration of the country, will be sure in the end to find a favourable opening. Alas, how few of those who emigrate from this country are possessed of such resources!

Many examples of the prosperity of the working classes came under my own observation on a recent visit to America. The workpeople are paid as far as

Wages in
the United
States

possible by the piece. The monthly pay sheet at the Merrimac Mills, at Lowell, where 2,600 hands are employed, amounts to 75,000 dollars, which gives an average of thirty dollars a month, or 30s. a week. The majority of the workpeople are Americans. There are many from Canada and the Old Country. The proprietors of the mills have established several lodging-houses for the unmarried women whom they employ. At each of these houses some thirty women are lodged. The house is placed under the supervision of a respectable matron. The cost of living is $3\frac{1}{2}$ dollars a week, and female operatives can earn from 14s. to 16s. a week over and above the cost of their board and lodging. The men pay for board 2s. a day, and their wages vary from 7s. to 10s. a day.

At the Lonsdale Company's Cotton Mills, near Providence, in a factory containing 40,000 spindles, one spinner attends to 1,408 spindles; and in weaving, one weaver attends to from four to six looms. In England, the proportion would be, on the average, one hand to every three looms, working at a higher speed than they have attained in America. Male weavers were earning from 44s. to 52s., and female weavers from 40s. to 44s. weekly. Spinners earn from 4s. to 6s. a day. Women pay for board and lodging, in lodging-houses provided by their employers, 12s., and men 16s. a week. The operatives earning these wages are better able to save money than the operatives in our own country; and many of the hands at the Lonsdale Mills have 1,000*l.* to their credit in the savings bank. At the great Harmony Mills at Cohoes, near Albany, where 4,000 hands are employed, two-thirds are emigrants to the States, principally English and Scotch, although there are many Germans and some French. The general wages are for

women from 3s. to 6s. a day ; for men from 6s. to 10s. a day. The cost of living is moderate, and assuming that a female operative earns 28s. a week—by no means a high average—she has 16s. a week to spend on dress and luxuries. At Cohoes a weaver attends to four, five, or six looms, but the machinery is not run at so high a rate of speed as in Lancashire. The mule is never worked at a speed exceeding three stretches a minute.

In Quebec wages have of late been rapidly advancing. Artisans can now command 8s. a day, while labourers employed in unloading ships, whose employment, however, is uncertain in summer, and in winter wholly ceases, earn 10s. to 12s. a day. A man with a family can live well on 4s. a day. The long winter is the great drawback to the prosperity of the working class in Canada. Quebec has its Wapping, its extensive suburbs, chiefly occupied by the poorer classes ; and there is no external indication in these quarters of a condition of life superior to that attained by the majority of our working men at home. In the Ottawa district, in Canada, the young farmers are able to find employment in winter by leaving their homes and going up to the forests to cut timber. They earn 30s. a week, and they are boarded in addition. In the spring the lumberer returns home with a considerable sum of money saved. He carries on his farming operations throughout the open season, and returns to the forests in the autumn. If the life is toilsome, and involves a long separation from the fireside at home, the perseverance of a few years will result in the accumulation of a valuable capital for farming operations, and secure to the settler his future independence.

Wages in
Canada

Ottawa is one of the rising towns of Canada. Its

prosperity is derived from the timber trade, and from its being the seat of the Government. Wages in Ottawa were last year (I speak of 1872) extravagantly high. Masons were earning 14*s.* a day. All classes of artisans employed in building were paid from 10*s.* to 12*s.* a day. For four or five months in winter building operations are suspended ; but provisions are cheap, and house rent is the only costly item.

At Hamilton, in Upper Canada, the wages for artisans are 8*s.* a day. House rent is about 28*s.* a month. The expense of fuel in winter is nearly equal to the sum paid for house rent. Food is cheap. A stock of salt beef can be laid down for the winter at the price of 1½*d.* a pound. The agriculturists in the Hamilton district are in a prosperous condition. Nearly every settler travels in a light waggon, drawn by a pair of serviceable horses. The population are robust and healthy.

In comparing the American and English operatives, or, rather, the English operatives when transplanted to the States, with the hands who have remained in the Old Country, it would seem that there is, as a rule, a higher development of skill in the individual operatives. The difference is attributable to the conviction that the present high rate of wages in the States could not be maintained unless the utmost skill and diligence were put forth.

Arbitration

The results which have followed from the reference of disputes relating to wages to arbitration are a sign of the happiest augury for the future relations between employers and employed. It has been urged, on the part of the employers, that the working class will only accept the decision of arbitrators when it is favourable to themselves. The organisation of the Trades Unions, and the influence which the more enlightened workmen,

acting as members of the executive committees of the Unions, possess over their less-instructed fellow-workmen, have been the means of securing obedience to every decision arrived at after careful investigation, conducted in an impartial spirit. Such influence becomes more important when the members of the Trades Unions are for the most part uneducated men. It is always more difficult for an employer to negotiate or to argue with a boiler maker than with a fitter. The executive councils of the Unions have entitled themselves to the gratitude of the employers of labour, by accepting the use of machinery, the substitution of which for manual labour becomes more and more indispensable with every advance in the standard of wages.

It is not by encouraging useless strikes, or by making an attempt, which in the end must always be defeated, to sustain a vast body of workmen and their families, when not in the receipt of wages, that the wire-pullers of the Trades Unions will best serve the interests of their clients, or enhance their personal influence among them. A wide field of usefulness is open to these captains of our great hosts of workmen, in which success is to be attained, not by war, but by diplomacy. The state of the trades in which their clients are employed should be carefully watched, and every variation in the prices quoted, every fluctuation in the cost of the raw materials, should be noted. And here I may frankly admit that the proposal of the International for a universal strike contained a few grains of wisdom. If the cost of producing an article in England were so much enhanced by an advance of wages that the foreign manufacturer would be enabled to undersell us in every market, it would be an act of self-destruction for English workmen to insist upon a rise, which would have the effect of depriving them of

Legitimate
province of
the Trades
Unions

employment. In such a case, except the workmen in the competing countries could agree to act in concert, an advance would be impossible, unless by superior skill or machinery the more highly paid workman were able to turn out a larger amount of work.

Foreign
competition

It has been already pointed out that in England we have to contend against competition of two kinds—against the cheaper labour of the Continent on the one side, and against the superior natural resources of America on the other. While we occupy at the present time a highly favoured position, attained not merely by the skill of our workmen, but by the administrative skill of their employers and the gradual accumulation of an ample capital in their hands, the race with other great manufacturing countries is very close. The Swiss have entered into competition with our own manufacturers, both in the home and foreign trades. The exports of textile fabrics from Switzerland, as we learn from Mr. Gosling's report, have risen from 12,485,000*l.* in 1860 to 26,464,000*l.* in 1871, an advance of 112 per cent. In this total the exports to the United States have risen from 509,000*l.* in 1862 to 2,159,000*l.* in 1872, in other words, over 324 per cent. In cheap silks and ribbons the Swiss are able to compete with the British producer in the English market. We may sum up the case in the words of Mr. Gosling: 'The advantages of Switzerland in competition with Great Britain are the use of water power as a substitute for steam power to the extent of upwards of 80 per cent., low wages, long hours of labour, and a minimum expenditure for management.' On the other hand, as an inland country, Switzerland has to pay heavy freights. The workmen are inferior in activity to our own, buildings for machinery are more costly, and, from want of capital, production is on a smaller scale

than here. The balance, however, seems to be greatly in favour of Switzerland, and cannot fail to become greater from day to day.

Mr. Lothian Bell has recently pointed out that in ores of the finer descriptions the resources of the United States are unlimited, while in coal our own wealth is, in comparison, poverty. The supplies of minerals in the New World are boundless, and the only limit to production lies in the want of hands to manufacture them.

A large number of the working class in Germany have been fascinated by the fanciful theories of Lassalle. His system is founded entirely upon the pernicious principle that the State is to do everything, and the people nothing for themselves. Karl Marx, as the successor of Lassalle, is the ruling spirit of the German socialists, and has become a prominent figure from his connection with the International. The socialist journals in Germany delight to reproduce the programme and doctrines of that society. They make noisy professions of atheism. They applauded the insurrection of the C6mmune in Paris. They disavow the warlike policy of Germany, and have endeavoured to substitute the community of class interests for the community of race, language, and country. It must not, however, be supposed that the number of these unpractical visionaries is proportionate to the noise which they make in the world. The influence of socialistic doctrines is not so great in England as on the Continent, and it is weaker in America than in England. Let us indulge the hope that no disposition may be manifested here to abandon the hopeful work of social, moral, and material progress for the pursuit of visionary and impossible schemes. The amelioration of the condition of the poor is not to be brought about by destroying the ancient fabric and

Communism
in Germany

foundations of our social and political system. It is easy to destroy, but it is hard to create new institutions better adapted than those handed down from past ages, and from men not less great and wise and good than the most gifted of our own contemporaries. Mr. Ruskin, a devoted friend of the working classes, in a passage of more than ordinary eloquence, has truly said, 'This is the thing which I know, and which, if you labour faithfully, you shall know also, that in Reverence is the chief power and joy of life ; Reverence for what is pure and bright in your own youth ; for what is true and tried in the age of others ; for all that is gracious among the living, great among the dead, and marvellous in the powers that cannot die.'

Co-operation

Our artisans may believe that the profits of former days were so large that employers can afford to pay the present rates of wages without raising their charges to the consumers. There is but one means by which this fallacy can be exposed. The workmen must become to a certain extent their own employers. In a co-operative establishment, created in part by his own hardy earned savings, the handicraftsman will find himself called upon to apportion equitably the earnings of his business between labour and capital. In this double relation he will learn how great are the difficulties besetting the employment of capital in productive industry in a country in which competition is so keen as it is in England. In no other country does capital command so low a rate of interest ; and if large accumulations of capital have been made, and money is therefore cheap, it should not be inferred that the rate of profit has been high by comparison with other countries, but rather that our employers of labour, as a class, have been distinguished by their frugality, their perseverance, and

their enterprise. I am grateful, therefore, to Mr. Holyoake for his vindication of their claims at the recent Co-operative Congress. He justly said that capital was the enemy of nobody, but rather the nursing mother of production.

The co-operative principle, in its application to the business of distribution, has been already most successfully developed. In creating co-operative establishments for the purposes of production, the accumulation of the necessary capital is an obvious difficulty. As wages were never so high as at present, this obstacle can be more easily surmounted now than at any former time. Some men may object to recognise the special responsibilities of a fellow-workman holding the office of manager of a large business by giving a proportionate salary. It is because the recognition of authority is essential, whenever anything practical is to be done, that the International Society has shown uncompromising hostility to the co-operative principle. The denial of a proportionate reward for superior intelligence or industry is the first article of its catechism. The absurdity of attempting to combine the energies of men for any definite object, without placing a competent chief at their head, has been humorously exposed by Mr. Carlyle. 'Ships,' he said, 'did not use the ballot box at all, and they rejected the phantasm species of captains. Phantasm captains with unanimous votings! These are considered to be all the law and prophets at present. If a man shake out of his mind the universal noise of political doctors in this generation, and in the last generation or two, and consider the matter face to face, with his own sincere intelligence looking at it, I venture to say he would find this a very extraordinary method of navigating, whether in the Straits of Ma-

Necessity for
the recogni-
tion of
authority

gellan or the undiscovered sea of time.' English workmen are less easily deluded by tall talk and sophistry than the more excitable populations of the Latin race. They should apply their practical sagacity to the difficult yet hopeful experiment of co-operative industry.

Demand and
supply
determine
wages

The price of labour, like that of every other commodity, must mainly depend upon the relation between supply and demand. The wages of skilled workmen have risen, because skilled workmen are scarce. How shall we increase their number, and improve their skill? The answer is, by bringing recruits into our industrial army from a class of society which has hitherto exhibited too strong a prejudice against manual labour. The same aversion to handicraft of every kind existed in the United States and Canada. In America a skilled workman earns 30 dollars, a clerk only 15 dollars a week; and, while it is almost as difficult for a clerk to obtain a situation in New York as in London, a skilled workman can always command employment. It is unnecessary to dwell on the evils that must ensue from a disproportionate increase in the non-productive classes of the community. Lord Bacon has truly said, that 'a population is not to be reckoned only by numbers; for a smaller number that spend more and earn less do wear out a greater number that live lower and get more.' My father's advice was often sought by parents anxious for the future of their sons. His counsel always was, that a young man whose destiny it must be to make his way unaided through the world should begin by learning a trade. It is a laudable ambition in a parent to endeavour to raise his family to a better station in life. He cannot bestow on his children too high an education. A wise man will be on his guard, lest the enjoyment of such advantages should render those occupations dis-

tasteful which afford the most secure and ample livelihood to those whose lot it is to labour. When justly appreciated, the condition of the skilled artisan should be as much esteemed as that of any other class of the community. He whose life is passed in performing much needed services for his fellow-men, whatever his special calling, holds an honourable station, and social dignity will ever be most effectually maintained by those who are the least dependent upon the favours of others.

In conclusion, the just claim of labour to share in the benefits arising from a thriving industry has of late been liberally recognised. Earnings in many trades have been unprecedented. Forethought is an especial duty in a time of prosperity. At no distant period, the progress of our commerce may sustain at least a temporary check. It will be sad indeed if the receding tide leaves behind it multitudes of our highly paid workmen without provision to meet a period of adversity.

Forethought
in time of
prosperity

III

CO-OPERATIVE PRODUCTION

ADDRESS TO THE ANNUAL CONFERENCE OF THE CO-OPERATIVE SOCIETIES, HELD AT HALIFAX, 1874

Opportunity
of meeting
co-operative
societies

BEFORE I enter upon the main topics of my address, I desire to express my grateful thanks to the Committee of the Co-operative Congress Board for the opportunity they have afforded me of taking a part in their proceedings. It is a constant source of sincere regret that, in consequence of my inability to carry on the business of a railway contractor, I experience a difficulty in maintaining those intimate personal relations with the working class which afford the readiest means of preserving a friendly union between the employer and the employed. Such an opportunity as that which I enjoy to-day, of exchanging ideas with the leading members of the co-operative societies, is accordingly the more welcome.

Absence of
employers

Here I may appropriately observe that the absence of large employers of labour on occasions such as this should not be construed as implying any want of interest in our proceedings, or unwillingness to take trouble to promote the advancement of the manufacturing population. The true interpretation is to be found in the exceeding pressure to which, in the keen competition of industry and commerce in the present day, every man of business is inevitably subjected. Every moment of

his time, all his powers, bodily and mental, are exhausted in the race; and the task of aiding and encouraging the self-helping efforts of the people, a task in which employers would, if they could, most gladly take their part, must of necessity remain in the hands of their more fortunate brethren, having leisure to devote to social and philanthropic work.

It is scarcely necessary to insist on the vast development of our co-operative organisation. The tabular return recently presented to Parliament on the motion of Mr. Morrison, one of the most earnest and judicious friends of co-operation, sets forth the statistical result in a most remarkable enumeration. It is generally dull work to listen to figures; but figures, when they represent facts, have an oratorical power of their own, often more striking and persuasive than the richest eloquence. If I am to narrate to you in a compendious form the story of your past achievements, I cannot accomplish my task without the aid of arithmetic. The number of co-operative societies in England and Wales is 746; the number of members 300,587, of whom 60,000 were admitted, and 32,000 withdrew, in 1872. The share capital amounted at the end of 1872 to 2,784,000*l.*, and the sums of 10,176,000*l.* were paid, and 11,379,000*l.* received during the year in cash for goods. The disposable net profit realised from all sources amounted to 807,748*l.* The enormous sums I have enumerated give proof that the principle of co-operation, in its application to the distribution of commodities among consumers, is convenient and practicable, and effects a considerable saving of expense.

Progress of
co-operation

The co-operative system tends to diminish the business of that large class who earn their livelihood in the retail trade of the country. As the co-operative system

Policy of
retailers

is more and more generally adopted, many who might have earned an income as shopkeepers must seek out another career. In the transition stage some suffering may be experienced by individuals. Changes will proceed gradually ; and there may be ample time for the absorption into other channels of the labour and capital displaced by co-operation. Retailers may, by a better system of trading, find themselves able to afford their customers the advantages they now receive at the co-operative stores. Retail prices have been enhanced by the unwholesome system of long credits. The business of the individual retailer has generally been so small that a decent livelihood could be earned only by making a high profit on a limited number of transactions. If the retailers' business were concentrated in fewer hands, and the credit system were abolished ; if the sound commercial principle were adopted of looking for a large aggregate gain by means of small profits but quick returns, and by making a small percentage on a large turnover ; the public might find that the exceptional advantages it now offers need not be confined to the co-operative system.

I am confident that I do not misinterpret the views of the friends of the co-operative movement when I say that the great object at which they aim is not to concentrate the whole business of supplying the public at a few stores, under the control of that special organisation which they direct, but rather to secure to the great body of consumers the means of obtaining the necessaries of life at the lowest practicable cost and of the best quality. So long as this object is attained, it matters not whether it be accomplished through the co-operative associations or by the agency of the ordinary retailer.

The management of a co-operative store is a task

not without difficulties. The members who withdrew from these societies in 1872—the returns for 1873 are not completed—were half as many in number as those who joined. The retailers may, therefore, reasonably infer that they are competing with rivals who have serious problems to solve. They must meet the competition of the co-operative stores by an improved organisation of their own trade. If they succeed, the community will be the gainers.

I pass from co-operative distribution to co-operative production. The equitable distribution of profits between labour, capital, the inventive faculty which creates, and the commercial and organising faculty which conducts a business, is the most important, as it is undoubtedly one of the most difficult of the social problems of our age. My hearers probably belong, in a large proportion, to the class whose interest it is to secure what they conceive to be justice to labour. I belong to the class interested in the rights of capital.

Co-operative
production
a remedy for
the jealousy
of capital

I know that there must be many here who think that, in the actual organisation of productive industry, there is a disproportionate appropriation of profits to capital. As instances of individual success are multiplied, so this conviction of the injustice of the existing order of things in the commercial world will be strengthened and confirmed. Whatever political economy may teach, however easy it may be to explain the operations of trade, between wealth and necessity there still exists a contrast, which mingles with the possession of riches a dark alloy, and cannot but make the burden of the poor man harder and heavier to bear. We may be able to prove that the capital of the large capitalist ordinarily receives but a moderate return, and indeed is freely employed on easier terms than a needy man would exact.

It is not less true that, measured by the strict necessities of life, an accumulation of wealth must, under all circumstances, be a superfluity. The sentiments so naturally aroused by the spectacle of this ungracious contrast between wealth and poverty have found an illustrious, though not unprejudiced, exponent in the poet Wordsworth :

Slaves cannot breathe in England —yet that boast
Is but a mockery ! when from coast to coast,
Though fettered slaves be none, her floors and soil
Groan underneath a weight of slavish toil
For the poor many, measured out by rules,
Fetched with cupidity from heartless schools,
That to an idol, falsely called ‘ The Wealth
Of Nations,’ sacrifice a people’s health,
Body and mind and soul ; a thirst so keen
Is ever urging on the vast machine
Of sleepless Labour, ‘mid whose dizzy wheels
The power least prized is that which thinks and feels.

Socialism is the protest of labour against the unequal distribution of the profits of production. There cannot be equality in a society composed of individuals unequally endowed in knowledge, natural aptitude, and in physical and mental power. While there cannot be equality, there must be justice.

By co-operative production a standard may be established for the adjustment of wages

Viewing the subject in the light indicated in these observations, I earnestly wish success to the experiment of adapting the co-operative principle to productive industry. In a co-operative mill, or workshop, or farm, the producers unite the double functions of capital and labour. The handicraftsman sits in judgment on the claims of the capital provided by his own thrift and past labours ; and while he is not likely to appropriate an inadequate rate of interest to a fund obtained from such a source, he cannot, at the same time, apportion too

much to capital without doing an injustice to himself in another capacity. If it be practically developed on an extensive scale, co-operative production must prevent many disputes concerning the rates of wages. In the co-operative establishments there cannot, in the nature of things, be any contention between a body of workmen and an individual whom they regard with unfriendly eyes as a selfish monopolist. Nor will the benefits be confined to co-operative establishments alone. The relations between employers and employed will be improved in cases where, as it commonly happens, the conflicting interests of capital and labour are represented by different individuals. The difference between those interests will be more easily adjusted when the capitalist is enabled to refer the labourer to the rates of wages prevailing in co-operative establishments, where they have been determined, not by a single individual, suspected of being without sympathy for the labourer, but by those very men who, in the capacity of workmen, become the earners of wages, fixed and paid by themselves.

The desideratum in all labour disputes is a standard, set up by an impartial tribunal, by which it may readily be decided what constitutes a fair rate of wages. When co-operative production has been introduced into all branches of industry successfully and on a sufficiently extensive scale, we shall have the universal gauge or measure of the workman's rightful claims. From the day when the workman shall take his part in the deliberations which accord to capital its fair rate of interest and to the wage earner his due, from the day when the workman may count with certainty on a just and equal participation in the profits of every enterprise in which he is engaged, strikes, it is to be hoped, will cease, and the energies of workmen will be devoted to the successful

prosecution of the industry in which they find their employment. If it should appear an exaggeration of the powers of human nature to adopt the principles on which Fourier insisted, and to regard all labour as a pleasure, it is possible to conceive conditions in which labour would appear more alluring and attractive than hitherto. The labourer might have more satisfaction in working under the direction of persons selected by himself, than he now experiences under the authority of an employer upon whom he is entirely dependent as the distributor of wages.

Generous sentiments towards the working class among employers

It has been asserted by prominent advocates of the labour interest that among capitalists there is a universal desire to acquire wealth, and but little disposition to pay due regard to the rights of others. If these allegations are sometimes justified, they do not correctly represent the general tone and temper of the employers of this country, among whom a higher spirit prevails than some ill-informed critics are ready to allow. In France and Germany similar representations have gained many credulous converts. In those countries, and especially in the former, there is much hostility between masters and men. Even when kind and considerate acts are done, they are regarded with suspicion. They are not accepted as the fruits of a generous impulse, or as meriting grateful recognition. In England, happily, class is not divided from class by bitter hostility. That such a feeling does not exist is conclusively proved by the support given by multitudes of working men at the recent general election to Conservative candidates, who, among other claims to favour, are supposed to be the chosen defenders of the rights of property. The disposition to be liberal towards workmen is developed, as a general rule, in proportion to the extent of the business and the capital

Evidence of the loyalty of the working classes afforded by the recent election

Large employers the most liberal

of the employer. The love of gain is most intense among certain smaller employers, who have recently advanced themselves from the capacity of workmen to that of employers. From those who have been nursed in ease and immunity from care it may justly be claimed that their dealings with their dependents shall be more generous and sympathetic.

It would not be well that capital should be favoured at the expense of labour, nor yet would it be for the advantage of the working class to diminish the motives to accumulate that fund which is the true fertilising source whereby enterprise can be encouraged and employment created. The ordinary interest upon capital in England is lower than in any other civilised country. The temptations to English holders of capital to invest elsewhere are already sufficiently great. All the countries of Europe, and, to a yet greater extent, the United States, are constantly bidding for the use of our resources. Capital employed in agriculture and railway enterprise in the United States yields a return at least one-third higher than the like investments in England. A further serious depreciation of our current rate of interest might prove prejudicial to our working people at home, by drawing capital more largely to foreign investments.

Danger to be apprehended from too low a rate of interest

It has been alleged that in England the class of persons is gradually being diminished who, without large means, enjoy the advantage of holding a position of independence. Theirs is an order essential in a happily constituted society, as the connecting link between the rich and poor. They are defenders of the rights of property, while their modest and frugal households offer no painful contrast to the condition of the less independent wage earners among whom they live. It is

Size of farms in England and the United States

said that the monopoly of capital is gradually leading to the extinction of the small farmers and the small shopkeepers, and that there is a gloomy prospect of a society, in which a painful gulf will separate the privileged few from the mass of the community. What does the recent census teach on this subject? If the number of large farms is increasing and the acreage of farms under one hundred acres diminishing, the process of change is slow. The number of farms of 200 acres and upwards, in 1851 and 1871, is within a fraction the same. In this connection it is interesting to note that, while the average size of the farms in seventeen representative counties of England was ascertained to be 152 acres, the average size of the farms of the United States, according to the census of 1870, was 154 acres.

The United States possess a boundless territory available for agricultural occupations, and the laws offer every facility for the purchase and transfer of land. Hence we may safely infer that, as there is a coincidence in point of size between the farms of England and the United States, the acreage has in each case been determined by considerations of convenience. If smaller holdings had been found to offer equal advantages, we may be satisfied that no obstacle would have been raised on the part of the landowners to a more minute subdivision. The average size of farms has been determined by long experience, and has been settled as between landlord and tenant by a countless number of independent negotiations, each party to the bargain looking mainly to his own interests in the transactions. So far at least as agriculture is concerned, no sufficient grounds exist for the assertion that impediments are raised up here and not found elsewhere, which tend to keep down the number of farmers cultivating small holdings, but not furnished

with capital enough to do justice to a large extent of land.

It might be a benefit to society that capital should be distributed among a greater number of individuals ; and it is because co-operative production would tend to promote that result that it is desirable that it should be extended. A single individual possessing large accumulations of capital may accomplish great good if he be steadfastly determined to make a right use of his resources. It is by such men that some of the most judicious operations have been carried out in this country for developing the mineral resources of an untried district, for the advancement of agriculture by costly drainage, for the comfort of the poor by the erection of convenient dwelling-houses, for the improvement of our towns and cities by the destruction of unwholesome habitations and the erection of others, furnished with all the contrivances of modern sanitary science, or for the extension of the boon of railway communication into thickly peopled districts. Works such as these, however profitable, generally involve such a protracted lock-up of capital, that the ordinary investor, who cannot afford to lose for a long period the interest upon a comparatively slender capital, is slow to undertake them. Apart, however, from such exceptional cases, the argument in favour of a more equal participation in profits may be admitted as theoretically incontrovertible. Grave as are the difficulties in its practical application, the extension of the co-operative system of production is much to be desired as a means to the end we have in view. Let us examine the difficulties in the way.

In deliberation the opinions of many councillors serve to establish sound conclusions in the mind ; but when you proceed to carry out a decision thus arrived at,

A more equal distribution of wealth to be desired. It may be obtained by co-operative production

Disadvantages of corporate management

when you have to govern and administer, all experience proves the infinite superiority of individual over corporate management. 'There be three points of business,' says Lord Bacon—'the preparation, the debate or examination, and the perfection. Whereof, if you look for despatch, let the middle only be the work of many, and the first and last the work of few.'

Opinions of
Mr. Erastus
Bigelow

Turning to contemporary authority, the opinion of Mr. Erastus Bigelow, of Massachusetts, quoted by Mr. Harris Gastrell, may be appropriately cited.

'The Corporation system has been a serious hindrance to the proper diversification of our manufactures. . . . I will point out briefly some of the disadvantages. When men who are occupied with other pursuits decide to invest capital in manufacturing corporations, it is usually done on grounds of general confidence. They invest because others are investing. They believe, without exactly knowing why, that such investments are safe, and will be profitable; or they follow the lead of some friend, in whose knowledge and judgment they confide. They do not act on their own acquaintance with the nature and requirements of the business: for such an acquaintance can be made only by careful investigation or actual experience. The natural consequence of all this is that capital for the extension of old or the projection of new manufacturing enterprises can seldom be obtained at those times when it is most needed and might most profitably be employed. This single feature of the system is fatal to any true and healthy progress under it.

'The capital thus raised must be expended. An agent is employed and enters on his work. Those capitalists who have invested under the stimulus of high profits are impatient for results, and urge him to hasty action on

ill-considered plans. A sudden and unnatural demand for operatives is thus created, raising the rate of wages and greatly enhancing the cost of goods. Lastly, unity of purpose and action, without which no business can be successfully prosecuted, can hardly be expected under the divided responsibilities of a large corporate organization.'

A ready means of applying the principle of limited liability to all descriptions of business was created by the Joint-Stock Companies Act of 1862. That enactment gave great facilities for the sale of their property to Joint-Stock Companies to men at the head of large concerns, who were tired of hard work, and anxious to hand down to their families an inheritance secured from the risks and fluctuations of trade. And, while there were many seeking to exchange the wear and tear of business for the comparatively easy life of the country gentleman, a large body of inexperienced and sanguine investors had deluded themselves with the belief that it was possible to conduct the most intricate operations of industry successfully, without technical knowledge, and without that constant personal devotion to administrative details which the iron-masters and manufacturers, whose property they had purchased, had found it essential to bestow.

Results of
Joint-Stock
Companies
Act, 1862

It is well known that in numerous instances the purchasers have sustained a serious loss. In some cases the prices paid have been excessive, and the failure has resulted from the exaggeration of the capital account. The explanation is more commonly to be found in the imperfect control exercised by a board of directors, assisted by a salaried manager, as compared with the administration of the individual employers.

Even in the choice of an agent, representative, or

Advantages
of individual
over board
manage-
ments

Selection of
agents

manager, a private individual has advantages over a board. Take the case of a railway contractor. The contracts for a long line of railway are subdivided, for the purposes of the supervision of the work, into sections rarely exceeding eight to ten miles in length. If the works are unusually heavy, the sections are shorter in proportion. A sub-agent is placed in charge of each section, and an experienced agent has the general direction of the whole contract. The principal contractor for the undertaking, by paying frequent visits of inspection, has opportunities of becoming acquainted with every sub-agent in his employ. He observes the progress made on his section. He can test his capability of dealing with every kind of practical engineering difficulty, by moving him from railway to railway, and putting him in charge of work in districts totally dissimilar in their physical character and resources. Gradually those employed in a subordinate capacity have an opportunity of showing their powers; and yet, while there is ample scope for individual merit, the supervision of the agent having the general charge will prevent the mistakes of a subordinate from producing very serious consequences. Thus, with the lapse of time, and without any grave risk of loss, the contractor may form an opinion as to who are his most trustworthy sub-agents; and can select principal agents from among their number with confidence, because their powers will have been thoroughly tested in a subordinate capacity. Here it will be obvious that long experience and continuity of management are essential. A board will make appointments upon the faith of testimonials. The private individual will trust to personal observation.

Knowledge
of detail

Again, administrative success depends upon the knowledge and management of details. The art of

organising large bodies of workmen will only be obtained by previous experience on a smaller scale. The general supervision of subordinates will be most effectually exercised by one who, by close observation on the spot, whether in the tunnel, the workshop, or the factory, has learned how to discharge in his own person the duties he has delegated to others. The greatest commanders and administrators have ever been consummate masters of detail. Napoleon's arrangements for the marches undertaken by his vast armies are admirable for the forethought and the care wisely bestowed upon details. A council or a board, only occasionally meeting, cannot manage a business; and, unless efficiently represented by their officers and servants, they are practically powerless. In a commercial point of view, great profits in productive industry are generally obtained by infinite small economies. Directors in a board room can effect nothing in this way. Every economy of expenditure must be suggested by close and constant observation of the processes by which materials are prepared and labour is applied to the execution of the work.

In the organisation of co-operative production, it is essential to secure the services of individuals competent to take the general management. The manual operations will be skilfully and probably more diligently performed in a co-operative establishment. The personal interests of the workmen will be so directly advanced by application and perseverance, that they will naturally work hard. Their best efforts will fail to insure a satisfactory result unless the general organisation is perfect also. This organising faculty is a rare gift, and it must be combined with long experience and excellent judgment, or the commercial result cannot be satisfactory. Many possess, in an eminent degree, inventive skill, and

Commercial
ability rare.
Co-operators
unwilling
to pay
adequate
salaries

have powers of persuasive speech, which enable them for a time to command great influence in financial circles. When, however, they come to deal with practical questions, they fail ; because mechanical and scientific ability will not command success, unless united with the qualities of prudence and diplomatic tact in the conduct of negotiations, both with the trade out of doors and with the workmen in their employ. Above all, integrity and high-minded resolution are needed to withstand the temptations that come from the love of money, and which operate so strongly on the minds of men of slender means and great ambition. We have the most conclusive evidence that the administrative powers of which I speak are as rare as they are essential, in the high salaries which men possessing such qualifications often obtain. I do not now refer to the managers connected with the large Joint-Stock Companies, whose technical and practical experience is indispensable to supply what is wanting in a board of directors appointed by shareholders to manage a business of which they have no knowledge. I speak of private firms, where the partners, with complete practical knowledge of the qualification required, give high salaries, because it is for their interest to do so. When shall we find co-operative shareholders ready to give 5,000*l.* a year for a competent manager ? And yet the sum I have named is sometimes paid by private employers to an able lieutenant. It is to some extent because those employed in co-operative establishments have shown a reluctance to pay what is necessary to enlist first-rate ability in the management of the business, that their operations have hitherto only been attended with partial success. Nothing but personal experience of the difficulties of the task would induce a body of workmen to reserve from their earn-

ings a sum sufficient to secure the services of competent leaders.

I would, therefore, earnestly advise those interested in co-operative production to discourage attempts to commence on a large scale a business difficult to manage. To grow gradually is more practicable as well as more prudent. A moderate capital is easily obtained. Large funds are not rapidly procured. Where only a few hands are engaged, the government may be conducted on a purely democratic basis. The energies of a multitude can only be combined with effect under an enlightened despotism.

Co-operative industry should be organised on a moderate scale

In the case of a co-operative establishment, the persons entrusted with plenary powers must, as a matter of course, be subject to the control of the contributors of the capital; but this control should be exercised only at stated though sufficiently frequent intervals. It was rightly pointed out by Mr. Morrison, in the debates at the last conference of co-operative societies, that, without the concentration of management among a limited number of persons, it would be impossible to preserve the unity of tradition and administration which are essential to establish the reputation of a factory or workshop, and to secure for the articles produced the high prices consumers are always ready to pay for goods of undoubted quality. The appointment of the manager by popular election—the electors being the hand workers, who are to serve under the chief selected by themselves—is quite compatible with continuity of management. In a trading concern, the acting partner or manager, having personal control, is rarely obtained by hereditary succession. It is seldom that a man of commercial genius has a worthy successor in his son; hence it may be anticipated that the elective principle will be

Appointment of manager

Popular election

at least as well calculated as the hereditary to protect the workmen from the disasters which must inevitably be caused by incapacity in the management.

The inseparable difficulties have prevented rapid extension of co-operative production

Allusion has already been made to the many difficulties, financial, social, and administrative, which have been encountered in applying the co-operative principle to production. The most recent report shows that the number of existing societies may almost be counted on the fingers. Though some of the experiments actually tried have been successful, the failures have been more numerous than the successes. The Paisley Manufacturing Society, the Hebden Bridge Fustian Society, the Eccles Quilt Manufacturing Society, the Lurgan Damask Manufacturing Society, are examples of co-operative production successfully conducted. They are on a small scale, and probably their success is attributable in part to the wisdom of the promoters in not attempting their operations on a too ambitious footing. The Printing Society of Manchester is a greater effort, and it is highly flourishing. It is possible that the business is of a kind which depends less on the administrative ability of the manager than on the individual exertions of the workmen. I fear, however, that the Co-operative Printing Society recently established in London has failed to command a business sufficient to produce a return upon the capital expended.

The Ouseburn Works

The most important experiment in co-operative production hitherto attempted in this country is that of the Ouseburn Engine Works. This company has sustained a severe loss ; and the workmen employed in one department of the concern have struck for higher wages. The occurrence of a strike in a co-operative establishment proves the difficulty of conducting an undertaking on a democratic system, when you have

to deal with many classes of workmen, possessing different and unequal qualifications.

The adjustment of the rates of wages in a case in which some members of the co-operative body must be paid at considerably higher rates than others, requires on the part of the latter no common measure of self-denial. It is sometimes hard to recognise the superior merits of others, even when we have the means of forming an independent opinion on their claims ; but when workmen, brought up in one trade, are required to assign much higher wages to artisans practising another trade, of the exact nature and difficulty of which they have no experience, they are naturally prone to doubt whether a sufficient reason exists to justify a distinction inevitably involving a personal loss to themselves.

Difficulty even for workmen to adjust wages

Thus, the inequality in the earnings of different trades, and of the same trades in different countries, is a common cause of dissatisfaction among those who receive the least liberal rates of pay. It does not follow that the complaints are reasonable. Where there are no special circumstances to redress the balance, such an inequality ought to be removed. In most cases it will be found that the condition of those in receipt of lower wages is more enviable than that of their rivals in other respects. Compare the hardy peasant with the tired denizen of a dismal alley in a great city, to whom the returning spring brings with it none of the glad sights and sounds which surround the country village as with a sweet enchantment. The rustic labourer has a garden gay with flowers. The leafy shades protect him from the noontide glare, and his ears are soothed by the melodious minstrelsy of nature :

Compensation for lower wages

The moan of doves in immemorial elms,
And murmuring of innumerable bees.

His labours are performed in the free fresh air. They are varied and interesting. They tend to invigorate rather than to exhaust his physical powers. The term of his life is longer. His health is more easily preserved. The charms of the rural life, as sung by the poet, and painted by the brush of a Linnell or a Birkett Foster, are to some natures inexhaustible. The golden corn, the purple heather, the sunny foreground, and the mellow distance—how great a contrast between these rural scenes, and the dull red walls and close canopy of smoke in which the factory operative is confined! Can any difference in the rate of wages fully compensate for the privations that he suffers?

Causes of
losses at
Ouseburn

To return to the Ouseburn Company, the causes of the early losses were frankly and ably explained by Dr. Rutherford in his speech, delivered on the occasion of the visit of this congress to the works, at their last conference. Orders had been booked at too low a price. The manager, by whom the directors were advised, was much at fault. The head of the undertaking should have been, as Dr. Rutherford so justly urged, a practical engineer, as well as a philanthropist. To secure the services of a competent manager, the remuneration required should have been measured, not by a few hundred, but by a few thousand pounds. The history of the Ouseburn Works is an illustration of the principles already laid down. The early failure is attributable to the want of that experience and technical and practical knowledge which can only be supplied by the appointment of a highly qualified engineer. When such a man has been found, all will go well with the Ouseburn Company.

Full price
should be
charged

A Quixotic idea has prevailed among co-operators that a percentage on the price charged to customers

should be returned. The policy of competing for business by underbidding rivals, placed in exactly the same relative position in regard to the cost of materials and labour, should be followed with the greatest caution. Keen competition in every department of our trade has already brought down profits to the lowest point. The aim of the co-operators should be to follow the example of those sagacious and experienced men of business, who always insist on full prices for their work, and endeavour to protect themselves against competition by superior excellence in the quality of their productions.

From the valuable reports of Her Majesty's Secretaries of Legation I can quote, for the encouragement of English co-operators, many successful applications of the co-operative principle. It is stated by Mr. Ford that the Executive Committee of the Tailors' Union in New York, on notifying the cessation of a strike in which the trade had been engaged in 1869, declared that their policy would thenceforward be to abandon the system of strikes, and to fight with the stronger weapon of co-operation. The co-operative principle has been adopted by those strange religious sects, the Mormons, Shakers, Economists, and Perfectionists. Widely as we may differ from their creed, it must be admitted that they have attained to great success in the organisation of labour. The Mormons at Salt Lake City have transformed 'a wilderness into a garden,' and I can speak from personal knowledge when I say that the Shakers are excellent farmers. Co-operative foundries have been established in New York and Massachusetts. An iron foundry is in full work at Troy, in New York, which was started in May 1866, with a capital of 2,700*l.* paid up. The shares were fixed at 20*l.* and limited in number to 2,000. In the first year thirty-two men, in

Encouraging examples of co-operation abroad

the second seventy-five, in 1869 eighty-five men, were employed in the works. A dividend of 10 per cent. was earned in the first year, and 30 per cent. more was paid on labour. The second year the dividends on stock and labour amounted to 89 per cent., and in 1869 they reached 100 per cent. The most skilled trades earn, owing to their steady employment, 35 per cent. more than the same classes of workmen would earn at similar wages in any private foundry. Great economy has been effected in the use of materials, and the strictest discipline is enforced. Up to the date of Mr. Ford's report, all the profits due to individuals had been paid in shares, with the view of applying the additional capital to the enlargement of the works. The co-operative movement, thus happily begun, has been since followed up with energy and spirit. Mr. Archibald, our Consul-General in New York, writing in 1872, says: 'During the past year, co-operative concerns have been organised in several departments of business, but with far greater success in industrial than in commercial matters. The Working Men's Manufacturing Company, with a capital of 25,000*l.*, has been formed at Emmaus. It is to be conducted on the co-operative principle, and will erect extensive works, including a foundry, forge, and two machine shops, employing at the commencement about 200 hands.' In Austria, the majority of the printers, though in theory advocates of the views of Lassalle in favour of Government workshops, in practice have adopted that sound doctrine inculcated by Schultse Delitsch, the eminent German economist, that every man should trust to self-help, rather than place his dependence on the Government. The printers of Vienna have established a co-operative press; and Lord Lytton states in his report that 1,500 printers were, in 1869

negotiating for the purchase of another office. Mr. Jocelyn, in his report of 1869, refers to the progress of co-operative production in Sweden. He tells us that this most difficult form of labour organisation has been particularly successful in that country, and attributes this fortunate result to a spirit of independence highly honourable to the Swedish workmen. They will willingly risk their savings for the sake of seizing an opportunity of rising from a dependent position to the freedom of co-operative industry. It has been found in Sweden that the smaller undertakings of this nature are the most prosperous. Where, on the other hand, many are associated upon an equal footing for the promotion of manufactures requiring unusual skill, the danger is great that the whole may become *de facto* the property of a few of the original founders, while the rest sink back into the condition of simple workmen under their command.

While the efforts to establish co-operative production in this country have not thus far been attended with a large measure of success, the importance of the principle at stake is so great that I should deprecate most earnestly the abandonment of further attempts in the same direction. The wiser course will be to avoid, as has been already suggested, commencing undertakings on a large scale. When the business is of a kind that cannot be carried out advantageously on a moderate footing, the co-operative principle should be applied to the execution of sub-contracts for portions of the work, to the supply of a part of a large order, or to the execution of a single process in a complicated manufacture. Judicious subdivision of work will give ample scope for the application of the co-operative system, when, from the nature of the case, superior administra-

When great undertakings are in contemplation co-operation should be introduced in execution of sections or parts

tive skill and large resources at the fountain-head are indispensable.

How rail-
way works
are sublet

To men engaged in a great effort to organise a new and better system for the application of capital and labour to production, it may be interesting to hear some details of the methods adopted by the English contractors who have been engaged in the execution of great railway contracts both at home and abroad. In the conduct of these works, the primary aim has been to give to the workmen a personal interest in the performance of an adequate quantity of work in return for the wages received. Supervision may prevent idleness. It cannot give that energy which is sure to be put forth when the reward depends on the industry of the worker. With the development of railway enterprise, the practice was adopted of inviting English contractors with competent resources to undertake railway and other works, not only in their own country, but in every quarter of the globe. The difficulties of supervision of necessity increased with the enlarged area of their operations; and it was essential to devise some plan by which it should, if possible, be made an advantage to every individual concerned to perform his share of the common task to the best of his ability. Thus, the system of sub-contract and piecework, originally adopted by the pioneers of railway construction, was extended to every operation where it was possible to apply it. The general character of the arrangements may perhaps be best explained by the selection of an example taken from actual practice. On the contract for part of the London and South-Western Railway, between Basingstoke and Winchester, the work of excavation was of more than ordinary magnitude, amounting to some $3\frac{1}{2}$ millions of cubic yards on a length of eighteen miles.

Not only were the works of a heavy and costly nature, but the time allowed for the completion was so short as to render the utmost diligence and energy necessary. The operations were carried on night and day, and 1,100 workmen were employed. One cutting near Winchester, in the deepest part, was from 90 to 100 feet in depth. Here, in spite of severe and unfavourable weather, the works were pushed on with the utmost diligence and determination. This was done even at a considerable pecuniary sacrifice, because the contractor was anxious above all things to maintain and increase the good reputation he had already begun to establish, and of which he was wisely jealous as the surest guarantee for his future success. At Micheldever there was one immense embankment, about 85 feet in height; and at Popham Beacons there was a short cutting, not more than 10 chains in length, intervening between two tunnels, of such a depth that 100,000 cubic yards were excavated in making it. The whole of these works were executed by sub-contract. The amount of work let to a sub-contractor was determined by the appreciation formed by the principal contractor or his agent of the ability of the individual to carry out the work. A man of superior qualifications was allowed to take a sub-contract for an amount of work increasing in magnitude in proportion to the confidence entertained in his ability. Some of the sub-contractors would take contracts for work costing in the total 15,000*l.* to 20,000*l.* and employing from 150 to 200 men. Frequently the sub-contractor would again let his work to the navvies at so much a yard. They worked in what were called butty gangs, or parties of from six to twelve men. The navvies would take a contract under a sub-contractor for excavating so many

yards of earth at so much per yard ; and they would divide the earnings equally amongst each other. Disputes would frequently arise between the butty gangs and the sub-contractors upon the question of measurement, and in such cases the resident agent or representative of the principal contractor was required to arbitrate. When the work was organised in the manner I have described, the function of the principal contractor was rather that of a practical engineer, superintending the execution of the works by a number of smaller contractors. The principal contractor, being responsible to the engineer for the faithful performance of the contract, was found to watch closely the work done by the sub-contractors, and to see that it was executed in such a manner as to satisfy the requirements of the engineer ; but he was not directly the employer of the workmen or the navvies. The policy was to avoid, as far as possible, engaging a large number of workmen by the day, and to pay every man concerned in proportion to results.

If little labour, little are our gains :
Man's fortunes are according to his pains.

The system of sub-contract was carried so far, that I have been informed by the same experienced person from whom I have derived the facts already quoted, that the scaffolding raised for the purpose of putting together the ironworks of the bridges of the Severn Valley Railway was mostly erected by sub-contractors. A carpenter would take a sub-contract for the erection of such scaffolding, fixing his price by the cubic foot.

It is always satisfactory to build our general principles, especially those which guide our action in the graver affairs of life, on as broad a foundation as pos-

sible. The following observations, coming from one of the most eminent shipbuilders of the United Kingdom, will be perused with interest by students of the labour problem, whether from a speculative or a practical point of view. The opinions of the writer from whom I quote fully substantiate the conclusions drawn by my father from a large experience in a totally different field of industry :

‘Your book and pamphlet on “Work and Wages,” which you gave me, have interested me very much, and directed my attention *particularly* to the past and present of my trades. I say “particularly,” as, although I knew roughly how they stood, your writings set me to make out with considerable if not perfect accuracy, some statistics which I felt sure would interest you as much as myself. I have, accordingly, put these into shape, premising you are at liberty to use them in your “work,” but without mentioning names or otherwise, further than as illustrating your views. The businesses in which I am directly or indirectly engaged are shipbuilding, engineering, forging, and founding—in fact, everything to complete steamships from the rough cast or malleable iron. I have seen no reason to regret keeping these several departments under separate heads and management. I purpose, however, now taking up iron shipbuilding only, as being much the largest department, and to compare two distinct periods or years—1868 and 1873. In 1868 we had no piecework. Between then and 1873 we introduced it, with some little difficulty, into the iron department and blacksmith work. We have not yet succeeded in bringing it into play in the ship carpenter and joiner, and some minor branches, but we bide our time. Fully half our pays go to piecework, leaving the balance for time payment. It is because we

Piecework
in ship-
building

only build high-class passenger steamships, that we continue to pay so large a number of men by the day rather than by the piece. I may observe that the wood department runs much higher in proportion to iron than in yards mostly devoted to sailing ships or cargo steamers. The steamships we built in 1868 and 1873 were almost identical in style of finish, though differing in tonnage. We had much trouble about 1868 with our iron hands. It was difficult to get men, the demand exceeding the supply. The introduction of the piece system, that is to say, the payment by results, led to hard, or at least fairly hard work, on the part of the skilled men, and to ingenuity on their part and ours to save unskilled labour by the introduction of machinery. The result has been that skilled and unskilled men make 50 per cent. to 75 per cent. more earnings. We get the work per ton of iron in the ships about 20 per cent. cheaper; and, from a much smaller number of men being required, the supply is approximately equal to the demand. Since we introduced piecework we can estimate to within a fraction what the iron and blacksmith work will cost, and we could never do so before. Here I would observe that all this has been accomplished with working time in 1873 reduced to 54 hours per week, whereas in 1868 the men worked 60 hours a week. As to the skilled hands—and they are all highly skilled men—in the wood departments, we had to pay higher wages in 1873 for 54 hours work than in 1868 with 60 hours. We have, however, met this by the introduction of machinery. Our joinery and cabinet department is now like an engineer's shop, with tools for *every description of work*. I may say in every part of our work, during the past three or four years, we have been introducing "steam" and other appliances where we could; and there has been

generally sharper supervision and attention on the part of those in charge, and our manager over them. I may now come to results. In 1868 we launched nine steamships, in round numbers aggregating 13,000 tons. I take gross new measurement in each case for the purpose of comparison. The wages bill was 78,963*l.*; average number of men and boys employed, 1,776. In 1873 we launched seven steamships, in round numbers aggregating 18,500 tons; wages bill, 91,838*l.*; average number of men and boys employed, 1,550. In 1868 the average wage earned per week of 60 hours was about 17*s.* 1*d.* In 1873, per week of 54 hours, about 22*s.* 9*d.* In 1873 the cost per ton, gross new measurement, in wages only, was fully 20*s.* cheaper than in 1868, but this reduction is due to the piecework departments. We consider it something to have met the increase in wages and diminution in hours of the "time workers" by the means already mentioned. I am not clear that these time workers work harder whilst they are at it than they did before the advance in wages and the decrease in hours, but we may have gained something from sharper overlooking. As I have said, we have effected considerable economies by the introduction of steam machinery and other labour-saving appliances. The piecework system keeps us clearer of disputes and trouble with our men than we were under the old method; and men and employers alike make a better result. I look to "payment by results" as a system calculated to put an end to many trade disturbances, but Trades Unions are opposed to it. As ours is practically a non-Union yard, we hope in time to overcome the obstacles in our way, and to make the one system universal. Piecework in the iron department of shipbuilding is now general in the Clyde district. As this year will complete my thirtieth in the

employment of labour, you will see that my experience of it is somewhat large.'

Partial application of co-operative system by Messrs. Briggs

On theoretical grounds, the adoption of the co-operative principle, pure and simple, might be strongly advocated. To those interested in the cordial alliance of labour and capital the methods of payment so successfully applied by Messrs. Briggs, and Fox, Head & Co., will well repay attentive examination. They afford, if only a partial, still a much easier, solution of the labour problem than that proposed by the advocates of a purely co-operative system.

Fox, Head & Co.

The principles of the scheme of Messrs. Fox, Head & Co. have been explained in a circular addressed to their workmen, in the following terms :

'This scheme has been prepared and adopted for the purpose of preventing the occurrence of disputes between employers and employed, which often arise, it is believed, from a mistaken estimate on the part of the employed of the amount of profit capable of being made. Hence a tendency to dissatisfaction with current rates of wages.

'The principles of the scheme are as follows :

'That every person employed shall have a pecuniary interest in the success of the business, and the profits to be made ; that interest being as far as possible in proportion to the services rendered.

'That the labour employed, whether of workmen, clerks, foremen, managers, or partners, shall be remunerated by wages or salaries at the rates customary in the district.

'That the capital employed shall be remunerated by a specified rate of interest.

'That the works and plant upon which the capital has been expended shall be kept up in a perfect state of

repair, and that to cover renewals and depreciation a reasonable allowance shall be made out of the profits of manufacture.

‘That a fund shall be created and maintained as a provision against loss by bad debts.

‘That, these provisions being satisfied, any surplus profit shall, at the end of each year, be ascertained and certified, and the amount thereof divided into two equal parts—the one to be paid to the capitalist, and the other to be divided among all those engaged in the manufacture, in proportion to the amounts earned by them during such year in wages and salaries.’

In the establishments under the control of Messrs. Fox, Head & Co. the employers have endeavoured to give to the workmen a direct personal advantage from the success of the business, while retaining in their own hands the absolute power of directing the general policy and management. Keenly alive to all the evils arising from divided responsibility, and the admission of workmen inexperienced in commercial affairs to an equal authority with their employers, they have sought to protect themselves from the ill effects of corporate management, and yet to give to the workmen a full share of the profits, in proportion to their skill and diligence.

It is some eight years since Messrs. Fox, Head & Co. brought out their scheme. In that interval, amid the many fluctuations to which their trade is always subjected, they have paid between 6,000*l.* and 7,000*l.* to their workmen, by way of bonus; and the result has been eminently satisfactory to the employers. They think they have a superior class of workmen, and that they stay longer at the works. They obtain the best prices for their manufactures. They have no disputes, and pay no contributions to standing committees or

courts of conciliation. Thus, the employers are well content with the arrangements they have made ; while the good conduct of the workmen shows that a feeling of mutual satisfaction prevails.

Messrs.
Briggs

I need not describe in detail the system adopted by Messrs. Briggs. In August of last year (1873), they distributed among 1,754 workmen employed by their company upwards of 14,250*l.*, as their share of profits for the previous year. It is stated by Mr. H. C. Briggs that several persons received 30*l.* each ; and that, since the distribution, they have had applications from their workmen for about 700 additional shares in the company ; though they were asking 10*l.* premium on the shares, on which only 12*l.* 10*s.* had been paid. About half the sum paid as bonus has thus been returned to the company by the workmen in premiums on the shares applied for. For several years a workman director has sat on the board, who is qualified by holding one share in the company and by the receipt of weekly wages. This representative of labour is annually elected by the votes of shareholders also receiving weekly wages. He was formerly one of their most bitter opponents. The Messrs. Briggs believe that the insight he has lately gained into the difficulties of conducting large industrial undertakings will effectually deter him from renewing the strife of former days.

Monsieur
Godin

Monsieur Godin, of Guise, has adopted an elaborate scheme of paying his workmen, with a view to giving them an interest in the success of the business in which they are employed. Capital, invention, and labour, being alike essential to the production of wealth, the problem to be solved is the apportionment of the profits equitably among the several interests concerned. In determining the rate of interest due to capital, the work-

men, in the opinion of M. Godin, should be previously consulted ; and the rate should be determined with due regard to the risks of the trade and other circumstances. In the scheme adopted in the establishment of M. Godin capital receives a clear 15 per cent. interest ; the workman is paid his ordinary wages ; and provision is made to cover the charges for administration and mechanical inventions. These necessary expenses having been provided for, the balance over, if any, is regarded as the net profit ; and it is apportioned, one-third to the reserve fund, and the remaining two-thirds to capital and labour, in proportion to the fixed amounts payable to each from the earnings before the net profits were ascertained. The practical operation of the system may be illustrated by an example. Assume that the sums payable had been :

Wages	£9,000
Interest on 40,000 <i>l.</i> at 15 per cent.	6,000
General charges.	1,000
	£16,000

Then if 2,400*l.* be the net profit, one-third, or 800*l.*, equal to 5 per cent. on the fixed expenditure, is set aside to reserve ; and the balance of 1,600*l.* is appropriated to capital and labour, in proportion to their respective shares in the fixed earnings. Thus, the sum of 900*l.* is added to the earnings of the wage receivers, the sum of 600*l.* is payable as bonus to the capitalist, and 100*l.* to the management. Under the system usually adopted, capital would have claimed the whole of the 1,600*l.* The evils of a general pay day are well understood by persons at the head of great industrial establishments—the drunkenness and disorder, the wasted earnings, the subsequent irregularity of attendance, and the familiar yet

regrettable incidents of a general distribution of wages to a numerous body of workmen. M. Godin pays his workmen every fortnight. He has divided them into sections, and each section is paid separately. The pays take place three times a week, and one section only of the workmen is paid on the same pay day. By this arrangement, the irregularities, inevitable when a general distribution of wages takes place, are avoided. The small proportion of men receiving their pay on any one pay day are kept in order by the example of steadiness afforded by their fellow-workmen, who are not disturbed by a recent payment of money.

Politicians
surrender
some profits
to secure
harmony

With these encouraging examples before them, many employers may be glad to follow the same course. Any plan by which workmen may be made to realise that they row in the same boat with their employers should not be lightly set aside. It is good policy to forego a portion of the profits of a prosperous year, in order to avert the calamity of a strike, with all the attendant evils of loss of profit, and bitterness and strife between masters and men. Capital and labour are essentially necessary and interdependent elements of production; and the man of business, not less than the philanthropist, must desire to see the representatives of those two interests closely allied.

Experiments
of partial co-
operation
the more
important
because
individual
manage-
ment often
indispens-
able

I remind this conference of these and other efforts to combine the principle of co-operation with the undoubted advantages of undivided responsibility in the administration of a large undertaking, because I am satisfied that the corporate system is not always applicable. Where no special personal influence is needed for the purpose of securing clients and customers, and where the internal economy of an establishment can be conducted by a regular routine, there will be no practical disadvan-

tage in the management by a board or council. When no transaction can be completed without long and difficult negotiations ; when an undertaking is of a kind that cannot be conducted in accordance with fixed rules, and the emergencies, which must from the nature of the case arise, are always unforeseen, and must be met on the spot by an administrator, upon whose skill and conduct all will depend, in such a case the co-operative system, pure and simple, becomes impossible. Hence the attention of masters and workmen, wishing to work together in friendly alliance, should rather be employed to devise schemes whereby the equitable distribution of profits among the workmen may be combined with the necessary concentration of authority in their employer.

There must always be peculiar advantages in the personal supervision (to borrow a French expression) of an experienced 'chief of industry.' The earlier railways of this country were completed with great expedition. There was an anxious demand for improved arterial communications by the new method, the superiority of which was universally acknowledged so soon as it had been proved practicable. In those days the difficulties of the pioneers of the railway system were great. The best methods of surmounting the engineering problems encountered were not yet perfectly ascertained. In driving a tunnel through a quicksand, in forming a high embankment, or excavating a deep cutting in treacherous and yielding soil, in carrying a line of railway over the trembling bog, the contractor sometimes endured the mortification of seeing the labour of weeks destroyed in a moment. When in trouble and anxiety, when a difficulty in the execution of the works presented itself, his representatives on the spot would seek for the valuable advice of their chief. In such an emergency he

A railway contract could not be executed upon the pure and simple co-operative system

assumed the management of the works ; and his was in fact the directing mind to which his subordinates referred, and by which they were guided. Nor did they ever recur to him without obtaining valuable counsel, the fruits of a wider and more varied experience than their own. It would assuredly have been impossible for any individual to accumulate the same knowledge, without having the same exceptional opportunity of keeping a continual watch over a large number of operations simultaneously in progress. In a time of discouragement the personal visits of the master, the words of kindness to the disheartened workmen, the novel yet practical suggestions evolved from a fresh and vigorous mind, brought to bear upon a problem which had baffled the men more immediately concerned, would never fail to cheer up the industrial army, and arouse them to new, and in the end always victorious, efforts. These details will have sufficiently explained the relations in which the railway contractor, or any other large employer, should stand to the members of his numerous staff. All experience shows that no board or council can take the place of an individual fitted by character and knowledge for his work, when such difficult and extensive operations as I have described are in hand. The inspiration given to subordinates under trying circumstances, the stores of knowledge and experience of the engineering art, the confidence imparted to engineers and directors and shareholders by the personal reputation of their contractor—these were advantages inseparable from purely personal management and responsibility ; and they never would have been obtained from the cumbrous machinery of a board. For complicated undertakings co-operative organisation will often prove ineffectual. A council of war never fights ; and no diffi-

cult task in the field of peaceful labour can be brought to completion without a trusted leader.

One more suggestion, and I close my remarks on this aspect of the case. In many descriptions of enterprise the commercial result cannot be ascertained until after an interval of time has elapsed too long to be tolerable to a body of workmen dependent on their weekly wages. I again choose an illustration from the experiences of the railway contractor. Take the case of a concession for a long line of railway on the Continent. The first conception of the project will probably come from some local engineer. He makes a rude preliminary survey of the country to be traversed. He comes to England with his rough studies to seek the financial aid and larger professional experience of one of our eminent engineers or contractors. The negotiations proceed, and the English promoters make a second and more careful examination of the scheme, involving a repetition of the original survey. Plans and an estimate are prepared at considerable expense, and negotiations are thereupon commenced with the Government through whose territories the proposed railway will pass. Weary months, and sometimes years, elapse before a decision is obtained. I will assume the decision to have been favourable, and that a concession has been granted. Then follows the execution of the works, which, if the length of the railway is considerable, may probably occupy a period of three years. While the construction is progressing, financial arrangements must be made, in order to form a company to take over the concession from the contractors, and to raise the capital for the line by public subscription. The subscription may possibly be only partly successful. In that event, the contractor must meet a large proportion of the expenditure from his private

Co-operation not applicable where there are inevitably long delays in realising profits

resources. Before he has succeeded in disposing of his proportion of the shares or bonds allotted to him, a European war may have broken out. In that case an indefinite period must elapse before the securities are realised. I have here sketched no imaginary picture. In the business with which my father's name is identified the history of every transaction is a repetition of the story I have narrated. I am not exaggerating when I say that an interval of ten years ordinarily elapses between the opening of communications with the original promoters and the final payment for the construction of the works. You may easily imagine the hazards and uncertainties of an enterprise of this nature ; and you will, I am confident, be of opinion that no true friend of the working classes would recommend them to risk their hard earnings in such adventures. Happily the general business of the country is of a more stable and methodical character, and affords a more suitable field for the application of the co-operative principle. There is much to give encouragement to co-operators to persevere in their noble efforts to place the great body of our industrial workers on a footing of independence. The co-operative system must be more congenial to ordinary human nature than the more usual organisation of labour, under which the workman has no voice in the management of the business by which he earns his livelihood. The love of liberty and independence is universal in civilised society, and it is as keen in the factory and workshops as in the senate.

General arguments for the co-operative system

Co-operative economy

And now I must pass on to consider other developments of the co-operative principle, second only in their importance to co-operative production, and perhaps more practicable in execution. It is impossible to insist too strongly on the necessity of adopting every means of

enabling the labourer to lay out his scanty resources to the best advantage. The co-operative stores furnish him with supplies on the most advantageous terms. But this is not the only object at which we ought to aim. Economy in consumption is scarcely less desirable. The co-operative associations should organise the means of imparting a complete knowledge of culinary matters to the mass of the population. In all great towns workmen's restaurants might be established on a large scale. The more extensive the arrangements, the more easy it would be to introduce the utmost possible economy. The midday meal might be eaten by many artisans and factory operatives at the restaurant itself ; and for others who wished to enjoy the comforts of their own firesides, dinners and suppers might be cooked at the restaurant, and taken home to be eaten. Abroad, arrangements of the kind I have indicated have been long established in every large town, and especially in France and Italy, and have been found to work most conveniently and economically.

The great results which can be accomplished in a well-managed restaurant for working men are admirably exemplified in the establishment created by Mr. Colman, M.P., for the benefit of those employed in his extensive manufactory of starch and mustard.

Mr. Colman's
workmen's
kitchen

Among many recent efforts to ameliorate the condition of the working class, one of the most original and spirited has been made by Monsieur Godin, the founder of the *familistère*, or general dwelling house for his operatives and their families, at Guise. The principles of the scheme, and the mode in which the attempt to develop these principles has been conducted, are set forth by M. Godin in his interesting volume, entitled, 'Solutions Sociales.' The originality of the plan and the general

Familistère
de Guise

idea underlying the whole conception of the founder of the institution, that the condition of the masses can be elevated only by their mutual action for the common good, will be essentially acceptable to the friends of the co-operative movement.

Cité
Ouvrière
at Mül-
hausen

Many isolated efforts have been made in France and Belgium to improve the habitations of the working class. At Mülhausen especially a large number of houses for workmen have been erected, constituting what has been called a Cité Ouvrière. M. Godin objects to the dwellings erected at Mülhausen as being too cramped in dimensions, and he states that, the workmen having been encouraged to purchase their cottages, the founder of the Cité Ouvrière has lost all power of direction and control; that the rooms, originally barely sufficient for the wants of a family, are sublet as lodgings; that pigsties are constructed in the tiny garden attached to each cottage; and thus dirt and noxious odours are allowed to pervade the suburb. M. Godin, not without some justification, finds fault with the term Cité Ouvrière, and says that the name implies the separation of those who, by their labours, are the creators of wealth, from those who enjoy the use of that wealth by inheritance or by successful speculation.

A more favourable opinion of the Cité Ouvrière of Mülhausen has been formed by Lord Brabazon. In his able paper on the industrial classes in France, he observes that 'The condition of the lease granted to the workman, allowing him after a certain number of years to obtain the freehold of his house, has an immense moral influence. His self-respect increases, and he is enlisted on the side of order. The absence of supervision removes a fruitful source of irritation. The Cités Ouvrières erected for the workmen of Paris, though possessing every ad-

vantage of space, air, and light, have never been popular, because the strict discipline maintained—as, for example, the closing of the gates at ten o'clock at night—is an irksome restriction to the excitable and pleasure-seeking population of the French capital.'

The criticisms applied to the Cité Ouvrière at Mülhausen may be applied with greater reason to London and the great towns of our own country. The rich gather together in the most eligible situations. The price of land in certain positions becomes so enormous that it is impossible to erect houses at rates which, while not exceeding what workmen can afford to pay, will be remunerative to the owners and builders. Hence the working class are compelled to occupy more remote suburbs. They live in daily contact with no other class but their own, and a consequent danger is incurred of social disunion. This state of things is practically inevitable under our existing system. It is a regrettable incident of the great increase in our population. M. Godin holds it as a clear and paramount obligation of the wealthy to organise means for securing to the masses a larger measure of the luxury and comfort created by their toil and labour.

The tendency of modern industry has been, and will continue to be, towards the concentration of capital in large private or corporate establishments, and to production by machinery in substitution for manual labour. The use of machinery necessarily operates unfavourably to the interests of small manufacturers without the resources of capital. This general tendency of our industrial organisation has been promoted by the railway system. Consumers have been enabled to obtain their supplies from the cheapest markets, irrespective of those considerations of transport which in former times more

Effects of the
introduction
of machinery
and railways

than neutralised the advantages of different localities for special branches of trade. Before the introduction of railways it was essential to obtain the more bulky articles from the local producer. Now the consumers are enabled to go to the localities where the articles required can be produced of the best quality and at the cheapest rate.

M. Godin's
social palace
at Guise

The attention of employers has hitherto been concentrated on the organisation of the factory and the workshop on the great scale required in the present day, in order to carry on competition in manufactures with success. Though much has been done to organise the production, nothing has been done to organise the consumption and the use of products. The problem of domestic consumption has been solved, in the opinion of M. Godin, by the erection, close to his workshops at Guise, of an edifice which he calls a social palace. It is a vast barrack, capable of containing 900 inhabitants. The building is several storeys in height, and consists of three large courts, surrounded by galleries communicating with the rooms. Each room is let separately, so that the lodgers can regulate the rents in exact and constant proportion to their requirements. The unmarried and the married, according to the number of their family, can occupy a greater or lesser number of rooms. The building cost 40,000*l.*, and the capital expended has been divided into shares of small amount, with the view of inducing the workmen to purchase them, and thus to become their own landlords. The rents of the rooms give a return of three per cent. upon the capital, and the profit upon the sale of provisions gives an additional percentage of the like amount. M. Godin quotes the principles advocated by Fourier as the foundation of his system. Fourier thought that, by grouping many

families together, each individual might undertake for the general service of the community that special function in which he excelled. Cooking and all the domestic duties would thus be performed by persons specially selected. At the *familistère* general kitchens are provided for the whole establishment, from which the meals ordered by lodgers are supplied. The children, as soon as they can leave their mothers, are brought up first of all in infant schools, and then in more advanced schools, where they receive an excellent education. It is contended that under this system the working men enjoy by combination no small measure of those advantages which must otherwise be the exclusive privilege of wealth. Cooking being often badly done for the rich, it is vain to expect that it will be other than unskilful in the homes of the poor. To command the services of efficient persons, whether in the capacity of nurses or cooks, is regarded by M. Godin as among the greatest advantages of ample resources. By combination, the occupants of the social palace at Guise are enabled to place their children, even at a tender age, under the care of well-trained nurses, and to obtain their own food properly cooked. Where the working men live apart from each other in small houses, they are necessarily widely scattered. They are at a distance from their work; and their children are so far from school that their attendance is always difficult and often most irregular. In case of illness the services of a medical man may not be readily obtained, and medical comforts cannot be provided so easily as in an establishment having a well-equipped dispensary for the general use of the inmates.

The social palace at Guise stands in the midst of extensive and well-kept pleasure grounds on the banks of

the Oise. It has an excellent theatre, where dramatic representations and concerts are frequently given by associations formed for the purpose by the operatives. The internal management is carried on by committees, composed of twelve men and twelve women. The men devote themselves specially to questions relating to the amelioration of the conditions of the workmen, the rates of wages, and the formation of provident societies. The women supervise the quality of the provisions supplied from the co-operative stores and butchers' shops connected with the social palace. They superintend the management of the children and the arrangements for preserving order and cleanliness. It is alleged that there is an entire absence of crime in this singular community ; and that public opinion, the more sensibly felt when all dwell together under the same roof, has raised the tone of conduct and morals above the standard generally maintained among persons of the same class living in private dwellings.

A system of domestic economy, not widely dissimilar from that adopted at the *familistère*, has been extensively followed in the United States by the well-to-do classes. To avoid the difficulties and extra expenditure of a separate household, many married couples permanently reside at the large hotels. They secure similar advantages and suffer similar inconveniences to those experienced by the inhabitants of the social palace at Guise. The want of privacy and retirement, the loss of much that we should value and cherish in family life, are grave drawbacks inseparable from the *quasi* collegiate system, of which the operatives of M. Godin have been induced to make a trial. Life in common is more congenial to some individuals than to others. It would probably succeed better in France than in England. On

the other hand, there are many serious drawbacks in a too great isolation. On the whole, a marked success would seem to have attended the experiment at Guise. It deserves the most attentive consideration on the part of our working people in this country. They have already proved the value of the co-operative system for obtaining their supplies. The so-called social palace is a further development of the same principle. In numerous cases it might be found to offer most important advantages of comfort and economy.

The co-operative principle may be beneficially applied, not merely to productive industry or economy in consumption, but to the important work of providing higher amusements for the people. In Vienna the dramatic art is still maintained at a high standard. The theatres are a favourite resort of the people. The representations include pieces calculated to raise the moral tone and improve the taste of an audience. Some of the novelties latterly introduced into the English theatre tend to degrade the stage. With many illustrious exceptions, it may be said that inferior plays and players have been too easily accepted, and that some stage managers have sought to make money by appealing to those lower tastes which cannot be indulged without injury to the national character. Those who have led the way in other co-operative undertakings should apply themselves to the cultivation of the musical and the dramatic arts. The choral associations are a delightful and most elevating source of amusement in every town in Germany. Already, in many of our manufacturing towns, music is being widely and highly cultivated. The drama may offer greater difficulties, chiefly on the score of expense. The means at the disposal of many co-operative associations might be applied, to a limited

Co-operative
theatres

extent, yet with great advantage, to promote a taste for dramatic representations of the better sort among the people. The English have been reproached, perhaps not unjustly, as a nation destitute of resources for amusement. Indulgence in eating and drinking has been the only recreation the uninstructed labourer has been capable of appreciating. It is a lesson many of us have yet to learn, that time given to innocent pleasure is not wasted, and that there are other things besides fame and money for which it is worth our while to live. It is not well to concentrate all the thoughts on work, and take no pains to organise the means of pure and elevating enjoyment.

Education Act will train people for co-operative organisation

I am not here to speak of politics. But for Mr. Gladstone and Mr. Forster, and for their supporters in the last Parliament, I claim the merit they well deserve for a measure of infinite value to co-operation in the passing of the Education Act. Whether this or that provision be approved or disapproved, the substantial result must be to qualify all the working men of the rising generation to embark their savings, with more confidence than before, in a society for co-operative production. Until they have mastered the art of book-keeping, and have acquired the habit of reading those trade reports affording the only clue to their true position, co-operative workmen will remain too-dependent on the opinions of others. Being ignorant, they are inclined to be suspicious, and are reluctant to reward generously services they are unable to appreciate.

I sincerely hope that the progress of education in England may not be attended with the lamentable consequences that have followed from a wide diffusion of knowledge in other countries. In the United States the result of universal education has been a general aver-

sion among native-born Americans to manual labour. The dignity of the pen is so much more highly regarded than that of the hatchet or the hammer, that the youth of America universally prefer to take much smaller pay as clerks rather than earn the wages, double their own in amount, which are given to skilled artisans. The false estimate they have formed of the prestige of a sedentary occupation is due to their education. Even in Germany it has been found that foremen in workshops, notwithstanding their higher responsibilities, do not receive proportionate wages. The very general diffusion of education has made most artisans competent, and has made all desire, to undertake duties of supervision, and thus escape the indignity of physical toil. Education in Greece is practically gratuitous, and thousands of men think themselves fitted for some calling more intellectual than that of the manual labourer. Hence it is that while every deputy in the Representative Chambers, and every member of the Government, is besieged with applications for the smallest posts in the public service, the labour market is largely supplied from Crete and Turkey. The remedy must be to withdraw a part of the subsidy now given to the University, and to apply the funds to instruction in the practical arts. The mental energies of Greece should no longer be devoted to purely intellectual, to the exclusion of practical, work. Arguing from these examples, it may be apprehended that the advance of national education may not be an unmixed benefit to a people, hitherto pre-eminent in the practical arts, unless public opinion be firmly set against the tendency to regard the labour of the hands as derogatory.

An infinite number of plans might be proposed to ameliorate the condition of the people. The Govern-

People's
banks in
Switzerland

ment may, without weakening the spirit of independence, introduce the system described by Mr. Gould, and adopted with so much advantage in Switzerland, of establishing a people's bank, under the guarantee of the State, in every village. In the Swiss banks deposits of the smallest amount, even of a few pence, are received. Intending depositors bind themselves to pay into the bank a weekly sum. The minimum is fixed at $9\frac{1}{2}d.$ and the maximum at $2l.$ The payment is to be continued during three consecutive years. Interest is allowed at $4\frac{1}{2}$ per cent. on all sums above $4s.$ The rate allowed in our own savings banks is low. It might be raised without loss to the Government. A higher rate would materially increase the inducements to save. Every description of banking business is transacted by the Swiss banks. The special feature is that loans are made to depositors on the security of their deposits, provided the loan does not exceed 75 per cent. of the amount at credit. Interest is charged at 6 per cent. At the end of three years the deposits are returned, with the accrued interest and a proportionate share of the profits of the bank. The amounts so returned may be reinvested in the bank in $4l.$ shares, bearing $4\frac{1}{2}$ per cent. interest and entitling the holder to a participation in the profits. The first of these banks was founded so recently as 1865, and they have been most successful.

Additional
powers to
municipal
authorities
to improve
dwellings

A mode of perfecting another great social reform has been put forward by the Committee of the Charity Organisation Society on Dwellings for the Labouring Classes. They have recommended that the Government should endeavour to afford facilities for providing better habitations for labourers. Many private agencies exist for this purpose. The Peabody donations, which now amount to 600,000*l.*, may be quoted as a crowning instance of

individual munificence; while the Metropolitan Association, the Industrial Dwellings Company, established by Sir Sydney Waterlow, which has invested nearly 250,000*l.* in the erection of workmen's habitations, and the London Workmen's Dwellings Company, founded in 1862, may be selected as examples of extremely beneficial, and at the same time fairly remunerative organisations. The societies here mentioned have paid steady dividends of 5 per cent. By wise arrangements it is asserted that the work of reconstruction need not be unprofitable. The valuable sites in the centre of large towns are not appropriated to the best advantage. It is stated by the Metropolitan Association that, whilst the population of Westminster is only 235 persons to the acre, in the dwellings they provide, including in the area large court-yards and gardens attached, the population is upwards of 1,000 to the acre. The rate of mortality is, nevertheless, only two-thirds of the average of the whole of London. The Committee of the Charity Organisation Society are of opinion that large powers for the compulsory purchase of condemned property should be conferred on some suitable authority—in the metropolis a central municipal authority—and that the land purchased should be offered for sale or lease to private or associated building agencies. They quote, as an instance of the conspicuous success of such a policy, the action taken by the Municipality of Glasgow, under a Local Improvement Act passed in 1866. Availing themselves of their powers, the civic authorities have borrowed and expended upwards of 1,000,000*l.* in the purchase of property, a portion of which had been resold, while the greater part was let, yielding 24,000*l.* a year. The building had been conducted throughout by private agencies. At the outset a rate of six-pence in the pound had been anticipated, and a loss

of capital of 200,000*l.* The rate had actually remained at sixpence only for one year. It remained at fourpence for two years ; and had since been reduced to threepence, with the prospect of an early reduction to twopence ; while the capital loss was not now expected to exceed 50,000*l.* at most. Equal success has marked similar efforts in Edinburgh and Liverpool. The Artisans and Labourers' Dwellings Acts of 1868, which the country owes to Mr. McCullagh Torrens, has already produced excellent results in Liverpool. The Act originally contemplated the four purposes of compulsory repair, removal, compensation, and building. The powers of compensation and reconstruction were removed by the House of Lords. The Committee of the Charity Organisation Society recommend that those powers should be restored.

Solidarity
between the
working
classes

I cannot conclude these observations on the condition of the labouring classes without reference to the important influence that must eventually, and it may be very rapidly, follow from the increasing facilities of communication between distant centres of industry. Foreign travel, in former times, was the exclusive privilege of the wealthy ; but when the working men begin to circulate more freely from country to country, the class interests which they have in common will inevitably tend to bring them together. More and more they will regard with aversion those national struggles in which, from motives of personal ambition, their rulers in past ages have been too ready to engage. Already we see in Germany a party being formed whose sympathies are for France. The originators of the movement are the artisans in the two countries ; and, as their numbers will probably increase, they may exercise a valuable influence in promoting the blessed work of reconciliation. So, too,

between England and the United States the solidarity of the two peoples is a surer guarantee for a close and permanent alliance than the most elaborate contrivances of diplomacy. Our eminent writers appeal with equal success to Anglo-Saxon readers in both hemispheres; and when they visit the United States they are welcomed as men of whom the American people are proud, because they have conferred distinction on the whole English-speaking race. Our early history, our language, our literature, are common to both nations, and they are links which should unite us together as no other peoples can be united. I have elsewhere spoken of the workmen of the United States as the competitors of the English. I trust that their rivalry may be always generous.

As union is most earnestly to be desired between the same classes in different countries, so it is not less desirable between different classes in the same country. If it is hard for the privileged few to appreciate the difficulties of the masses around them, who are struggling forward in the battle of life, it is still harder, we may rest assured, for the poor to appreciate the peculiar trials of the rich. We may plead for princes their isolation, and for the nobly-born the absence of many powerful motives which fire the ambition of men of modest station and lead them forward to a career of usefulness and distinction. We may urge on behalf of the rich that they are a tempting prey to designing men, and can seldom earn the gratitude reserved for those who are believed to practise the virtue of self-denial. We may rest assured that the mass below them, contending for bare existence, have little sympathy to spare from the constant troubles of their own lives, for trials that to them must appear artificial and self-imposed.

Whatever the poor may feel towards the rich, the

Duty of the
rich to the
poor

duty of the rich towards the poor is plain. Whether moved by considerations of policy or by the nobler impulses of humanity, it must be the object of our universal solicitude that no class in society should be exposed to the fatal influences of despair.

Full many a green isle needs must be
 In the deep wide sea of misery,
 Or the mariner worn and wan
 Never thus could voyage on,
 Day and night, and night and day,
 Drifting on his weary way,
 With the solid darkness black
 Closing round his vessel's track.

Multitudes in every city are contending amid waves that threaten destruction ; and when, with anxious glances, they seek a refuge from the storm, can they descry the happy isles in which they may repose ? The land, if seen, is far away, their bark is sinking, and their only hope the aid of those who have already gained the shore.

An idea prevails in certain quarters abroad that no bonds of sympathy unite the affluent classes in England with the masses of their less fortunate fellow-countrymen. Much more truly may it be affirmed that in no other country is the same deep interest felt in the welfare of the poor. Philanthropic organisations innumerable are giving aid to all who are in sorrow. The ill-paid clergy, the decayed gentlewoman, the widow, the orphan, the sick, the destitute, whether in mind, body or estate, all are cared for ; most are partially, and very many are effectually relieved. The almoners of this generous bounty are among the best and noblest in the land. Many names are familiarly known. A still greater number are engaged in the same good work of

Generous
 sentiments
 prevalling
 in English
 society

whom the world never hears. It is often among those most exposed to the temptations of ease and pleasure that the purest charity will be found. It is because this sympathy exists that in England we have as yet been spared the miseries of social disunion; and from this, the most dire calamity which can befall a nation, Heaven grant we may remain for ever free!

IV

THE PRICE OF LABOUR IN ENGLAND

REPRINTED FROM THE 'INTERNATIONAL REVIEW,' NEW
YORK, SEPTEMBER 1876

Law of
wages.
Adam
Smith

At the present time, trade in England is depressed to a degree almost unexampled in the history of British commerce. As a necessary consequence, the tendency of the rate of wages in the principal manufacturing industries is in a downward direction. All our accumulated experience in the development of productive industry in the age in which we live does but confirm the principles laid down by Adam Smith and the early masters of the science of political economy. 'When,' as Adam Smith has truly said, 'in any country the demand for those who live by wages—labourers, journeymen, servants of every kind—is continually increasing, when every year furnishes employment for a greater number than had been employed the year before, the workmen have no occasion to combine to raise their wages. The scarcity of hands occasions competition among the masters, who bid against each other in order to get workmen, and thus voluntarily break through the natural combination of masters, not to raise wages.'

The course of events in the British labour market in 1876, is a striking confirmation of the simple truths

enunciated in 1776 by the author of 'The Wealth of Nations.'

The same axiomatic principles were set forth in the clearest and most concise form by Mr. Ricardo, in 1817. 'Labour,' he wrote, 'is dear when it is scarce, and cheap when it is plentiful.' To these expositions of the simple rules which govern the rate of wages, I can only add the lesson derived by my father from his great experience as an employer. The best paid workmen are generally the best, and the worst paid the worst.

It might have been expected that these principles would have been accepted universally; and yet how few employers of labour act as if they had any faith in the accuracy of these deductions from the experience of mankind! It was my father's fortunate lot to be among the first who directed their attention to the construction of railways. As a pioneer of the present generation of railway contractors, he undertook large works in every country of Europe, and, Africa excepted, in every quarter of the globe. With such rare opportunities of estimating the relative efficiency of the labourer of many races, and under every vicissitude of climate, the conclusion at which he arrived was this—that the cost of labour was practically the same in all countries. The proportionate cost of skilled and unskilled labour may vary; but where there was no exceptional disturbing cause, as from the sparseness of population in a sterile or an unoccupied region, the cost of labour was in all cases calculated at the same amount, and the soundness of the calculation was borne out everywhere by the result. I must not occupy your readers further with the elementary principles already stated.

In the relations between labour and capital in England, it is satisfactory to observe the gradual abate-

Recent
legislation
on Trades
Unions

ment of hostile feelings. Among the order of men to whom I belong, generous sympathies are cherished towards the working class ; and these sentiments are reciprocated by the majority of the leaders of Trades Unions, and by the operatives under their guidance. The solicitude of the employers for the welfare of the working class has been exhibited in a most practical form, in the recent amendments of the laws relating to trade combinations. The improvements effected are summarised in the following passage from an article in the 'Times' newspaper, quoted in the 'Annual Register.' By an Act passed in the Session of 1875, 'all breaches of contract between masters and workmen cease to be, in the eye of the law, criminal offences. Damages may be recovered from workmen for breach of contract of service, and the courts may, at the request of defendant, order specific performance of his contract in place of damages, with the alternative of a short term of imprisonment in default of his new undertaking. But criminal and penal proceedings can no longer be taken.'

By another Act of the same Session, trade combinations ceased to be subject to indictment for conspiracy, except in cases where the objects of the compact were themselves legally punishable. It is now admitted by the warmest advocates of the rights of workmen, that the state of the English law, as it affects the industrial classes, no longer presents any grievances of which they have reason to complain.

Capital in
England
obtainable
at low rates

The most substantial grievance of the British workman is of a nature which cannot be removed by legislation. In the United Kingdom, after centuries of active enterprise in the pursuit of commerce, capital has been accumulated in a more ample store, in proportion to the population, than in any other country in the world. The

result is that the ordinary rate of interest is lower in England than in any other money market in Europe. The average rates for the year 1875, in the open market, were as follows :

	Average rate of interest for 1875
London	3 per cent.
Paris	$3\frac{1}{4}$ „
Vienna	$4\frac{1}{2}$ „
Berlin	$3\frac{3}{4}$ „
Frankfort	$3\frac{5}{8}$ „
Amsterdam	$3\frac{1}{4}$ „
Brussels	$3\frac{1}{2}$ „
Hamburg	$3\frac{3}{4}$ „
St. Petersburg	$5\frac{1}{4}$ „

Money being abundant, and the rate of interest low, outlets for investments are eagerly sought for. It is in London that foreign countries, in a state of impending bankruptcy, have of late conducted their principal borrowing operations, and their appeals to a credulous and ill-informed public have not been made in vain. If, in any trade or business, whether in commerce or agriculture, in mines or in ships, at home or in the remotest regions of the earth, a return has been anticipated beyond the low nominal rate of interest, eager and credulous people have hitherto been only too easily induced to embark their capital. A large proportion of the annual savings of the country have thus been squandered away in injudicious speculations ; and, even when capital has been attracted to a legitimate trade, if the profits have exceeded what may be called the normal rate of interest, over-production has ensued, and the period of short-lived prosperity has been followed by a long depression. A serious fall in the value of manufactured goods has been inevitable ; and the workmen,

whose wages have been unduly advanced by excessive demand for their labour in prosperous times, have been compelled to submit to a reduction, or to suffer the more cruel alternative of entire loss of employment.

Consequent
over-pro-
duction

The recent history of the iron trade presents a striking illustration of the course of events which has here been sketched out. The circular of Mr. Müller, of Middlesbrough-on-Tees, quoted in the commercial review for 1875, published in the 'Economist,' contains the following passage: 'The year 1875 has been a period of hard struggle in the iron trade. The crisis has been felt more severely than those of 1857 and 1866, because the iron trade had not at that time attained the dimensions it now occupies; nor were former crises preceded by such extraordinary prosperity and inflation as had been developed during 1871-72 and 1873. In the course of these years, a great amount of capital had found its way into the iron and coal trades, helping to bring up the means of production and manufacture to the level of the exceptional demand then existing, but which could scarcely be expected to continue. When, therefore, this demand slackened, and prices declined, the burden was felt first by undertakings which had been established on the basis of extreme ideas. It is this great and sudden prosperity which has been so baneful in its effects on all classes of society, from the workmen upwards. When in due time the tide turns, and the reaction sets in, outside capital begins to be nervous and fidgety, and tries to get out as fast as possible. A wholesale reaction is thereby often magnified into a disastrous crisis—a short epidemic in business, which, while removing much that is weak, injures also much that is worth preserving.'

Iron trade

A very large proportion of the total quantity of coal raised is consumed in the manufacture of iron. After a

long period of depression, the price of iron rose in 1871, as described by Mr. Gladstone, not by steps, but by strides—not by strides, but by leaps and bounds. In September 1871 forged pig iron was selling for 50s., while coke was selling for from 10s. to 12s. a ton. In July 1872, the forged pig iron rose to 120s., more than double the price of nine months before, and coke, following the advance in iron, rose to from 37s. 6d. to 42s. a ton. These high prices implied a high rate of profit; and forthwith everybody engaged in the iron and coal trades applied his utmost energies to the increase of production, while new capital for the development of these industries was obtained, with accustomed facility, from the inexperienced investors who abound in an old country. The great pressure thus brought to bear on the labour market naturally caused a rapid advance of wages.

Coal trade.
Rise of
wages

It was estimated by Mr. Pease that the cost of getting coal in Durham had increased 50 per cent. between 1870 and 1872; and Mr. Macdonald, the president of the Miners' National Association, estimated that the cost of getting coal in Northumberland had increased, between 1868 and 1872 and 1873, from 60 to 65 per cent.; though he pointed out that the selling price had increased 120 per cent. Inflation was promptly followed by a corresponding reaction. As prices fell the masters required that the men should accept reduced wages, and a long conflict naturally ensued. The issue was raised in a most conspicuous manner in South Wales, and it may be interesting to record some of the principal incidents of the struggle.

In the years 1871 and 1872 the price of coal had been increased about 100 per cent. The culminating point was reached in 1873. Happy for the public, the

Strike in
South
Wales

exceptional rates were not long maintained. The subsequent fall in the value was extremely rapid. Steam-coal fell from 22s. a ton, in October 1872, to 12s. 6d. a ton in December 1874. In May 1875 the price of coal was only 39½ per cent. higher, while the wages of the men were 60 per cent. higher than in 1870. In 1870, the average wages in the collieries were 4s. 2d. a day. In 1874, the average earnings were 6s. 8½d. a day, assuming that an equal quantity of coal was cut. After a prolonged resistance the workmen in South Wales were compelled to surrender. A deduction of wages was fixed at 12 per cent. for three months, and it was agreed that any further change in the rate should be regulated by a sliding scale, depending on the selling price of coal. A joint committee of workmen and masters was appointed to prepare a scheme for the proposed sliding scale.

Thus, after a disastrous struggle, representing a loss in wages to the workmen estimated by Lord Aberdare at three millions sterling, the truth of the doctrine laid down by Adam Smith was once more confirmed. 'The condition of the labouring poor is hard in the stationary, and miserable in the declining, state. The progressive state of trade is in reality the cheerful and the hearty state to all the different orders of society. The stationary is dull, the declining melancholy.' It cannot be too strongly impressed on the intelligent minds of the operative classes that it is only when trade is in a progressive state that wages can be increased. Strikes, in a rising market, are generally successful. Strikes, against a falling market, inevitably terminate in disaster to the workmen.

Another able writer in the 'Economist' gives similar testimony to the truth of the great principles laid down

in the quotation just cited from Adam Smith. 'Decreasing employment,' he says, 'has compelled the adoption of lower wages, and has enabled the employer to obtain more and better work for the money paid than was possible during the exceptional period of 1871-73. Indeed, it must be remembered that our great iron and coal industries have been rendered unprofitable, not merely because wages rose inordinately, but because, as the wages rose, the quantity and quality of the work given for more money became less and less. The workshop became, in no small degree, the paradise of negligence and incapacity; evils to be cured only by the sharp physic of privation.'

In the finished iron and engineering trades, the workmen have succeeded, within the space of a few years, in reducing the hours of labour to nine a day, and they have obtained a substantial advance of wages. Being anxious that the present condition of the iron and coal trades in England should be impartially exhibited to the readers of the 'International Review,' I asked Mr. Potter, the editor of the 'Bee Hive,' the leading journal on the affairs of our Trades Unions, to state the case from his point of view.

'In the coal trade,' he says, 'the highest wages are earned in Northumberland and Yorkshire. Advances in miners' wages began to take place at the close of 1871. In West Yorkshire the advances were about 59 per cent. on the prices paid in 1871; in South Yorkshire 57½ per cent.; in Lancashire 60 per cent.; while in Cheshire and the Oldham districts the advances were considerable, more perhaps than 100 per cent.; but the point from which they rose in these districts was very low. In Durham the advances were 57 per cent.; in Northumberland 57 per cent.; but in Scotland, where

wages were very low, the advances reached 140 per cent. In North Staffordshire the advances were 55 per cent. and in Cumberland 54 per cent.

‘The general reductions have brought wages down in all the coal districts to very near the old level. But it should be borne in mind that, where the coal is used for manufacturing purposes, the wages have been better maintained, as in Yorkshire, and certain parts of Lincolnshire and Derbyshire; while in other districts, where the consumption has been in connection with the iron trade, they have gone down. There are places where perhaps 15 per cent. is yet retained, while in other places there is scarcely anything over the wages of 1871; and, if the increased cost of living be taken into account, the gain all over has not been much, and the downward tendency still continues.

Action of
Trades
Unions

‘In this matter it might not be amiss to bear in mind that the miners’ Unions are of recent date, the greater number having been established within the last five years. They have done a great deal in regard to the general improvement of their condition; but their discipline is by no means perfect, and there is much to be done among them in the work of organisation.

‘It is also worth noticing that in the trades where the Unions have been more perfected, wages have not been affected by the state of trade. The Amalgamated Engineers, the Iron Founders, the Steam Engine Makers, the Iron Ship Builders, and the Boiler Makers have not been reduced at all. These trades have obtained advantages during the years of briskness of trade, particularly in regard to reduction of hours of work, but nothing has been given up by them, owing to the present slackness of trade.

‘I may state that coal-hewers’ wages, which are the

best of the colliers', will not average more than 5s. per day, while some of the day workers go down to 3s. per day. It should also be borne in mind that miners can not well work more than five days a week.

'It will not be far from the mark if we say that the wages of miners in 1871 were 4s. per day, though in some branches they were much more. What they were at the highest will be seen by the percentages stated in this summary.'

The agricultural labourer has, I rejoice to record, shared in the generally improved condition of the labouring classes in England. Until within a recent period the condition of the rural population in many districts was a dishonour to a country abounding in riches and resources of every kind. The blessings of education and political intelligence had not been extended—even now they are but partially enjoyed—among the inhabitants of the secluded villages and hamlets of the agricultural districts. The humble tillers of the soil had no conception of a system of trade combination. In their complete ignorance of any other condition of life than that which they had inherited from their forefathers, they had no definite aim or plans for the improvement of their lot. They endured their poverty with dogged submission. At length, however, the rural labourer found a powerful and eloquent advocate in the person of Mr. Joseph Arch. By arguments based upon a more or less accurate appreciation of the facts, but, in the main, conclusive, the labourer was urged to ask for an advance of wages. The demands made were not extravagant. In Suffolk, for example, the men asked that their wages should be increased from 13s. to 14s. a week. This modest request was met on the part of the farmers by the formation of a counter association,

Wages of
rural
labourers



and ultimately the labourers throughout an extensive district were locked out.

The course adopted by the employers was condemned by all impartial and thoughtful men. In one of his characteristic and sensible letters to the 'Times,' the Bishop of Manchester stated the case against the farmers in plain and forcible terms. 'Could a man,' he asked, 'at the present prices of the necessaries of life, maintain himself and his family, he would not say in comfort, but even with a sufficiency of food, fuel, and clothing, to enable him to put his whole strength into his work, on a smaller income than 15s. or 16s. a week? If the farmers said they could not afford to pay this rate of wages with their present rentals, and could prove this statement, then rents must come down: an unpleasant thing to contemplate, for those who would spend the rent of a three hundred acre farm on a single ball, or upon a pair of high-stepping carriage horses. But, nevertheless, one of the things is inevitable.'

The farmers succeeded for the time in their resistance to the demands of the labourers. They and their families performed the manual labour on their farms, which had hitherto been carried on by hired workmen. The results, however, of the labour movement in the agricultural class have been considerable. The labourers were defeated in their pitched battle with the farmers; but they subsequently obtained considerable advances in all those districts of England where the lowest wages had hitherto been given. Space does not permit me to follow up the labour movement in all its ramifications in Dorsetshire and other counties. The actual position of the agricultural labour market is, however, summed up, from a Unionist's point of view, in the following letters received from Mr. Joseph Arch and from Mr.

Henry Taylor, the Secretary of the Union of Agricultural Labourers, in reply to an inquiry which I ventured to address to them on behalf of the 'International Review':

'May 9, 1876.

'I would say that we have no official statement as to rates of wages in the rural districts, and in speaking of the rises during the past three years we can only generalise. Having made myself intimately acquainted with the various counties in which our cause exists, I feel justified in saying that at least three shillings per week have been gained on the old wages prior to this movement. In North Lincolnshire the wages run as high as 21s., and, coming southward, they are as low as 13s. and 14s. In Norfolk, 14s. and 15s. is about the price for ordinary day-labourers, some receiving 13s. Carters obtain more by 1s., or in some cases 2s., than ordinary men; but of course their work entails more hours, as well as Sunday duties. Suffolk is about 1s. under Norfolk. Cambridgeshire and Bedfordshire about the same, or tending rather downward. In Wiltshire there are a large number who work for 11s.: in fact, we have men on strike at present against that wage. Hampshire about 13s. Oxfordshire the same. Warwickshire from 18s. to 13s. A few miles' separation often makes a great difference in wages. Of course manufacturing towns or public works make the difference frequently. But in other cases there is a difference of one or two shillings, which is simply attributable to the spirit of the men, who, in most cases, are too ignorant to know aught of the labour market, or are altogether too spiritless to move, and otherwise involved in poverty. In most cases where the Union is in force, wages are better—other conditions similar—than where

Mr. Taylor's
letter

there is no Union. This can of course be understood. The men are of more courage, become excited to move, have assistance to move, and are directed in their movements. But, migration apart, the men would get better terms if they demanded them ; but in many cases they are too timid. This is improving, however. I said that there had been a rise of 3s. all round. I wish to keep within the mark ; but I believe 4s. is nearer truth. And this is not all. The piecework prices are much improved. They determine the bargain before performing the work, unlike the old custom. And then I am assured that the independence of the men, and the liability of their moving, have caused the employers to be much more cautious and respectful in their attitude to them.'

Mr. Taylor enclosed a letter as a sample of the correspondence in which he is hourly engaged, which, omitting names, I give as a typical case :

' May 8, 1876.

' Dear Sir,—We saw in the "English Labourer" that Mr. Miller goes to Canada the 24th of this month, and that he wishes to take members of the Union with him. We gave our names in to our secretary, and thought to go in March. I am working for 10s. a week, and I hope I shall have the good luck to go, for I am tired of England, for we are half-starved. If the men would all be Union men it would be better for all ; but they hang back so here, and they that has joined more than half has left the ranks. They say Mr. Arch ought to come among us and cheer them up. I think myself if the speakers was to come often, our branch would soon grow stronger. Dear sir, I hope you will send by return, and tell me whether it's free emigration, and

whether we can be sent free. There are five of us, one boy fourteen and a girl nine, and an older daughter, who is very weakly. She earns her living by sewing. If we are to go, please send the tickets at once, as I have many things to do before we go.'

The following is from Mr. Joseph Arch :

'Barford, Warwick : May 13, 1876.

'The wages of the farm labourers have been advanced in every county, where our association has gone, from 2s. to 3s. per week, viz. : from 9s. to 12s., and in some parishes more, say 13s. and 14s., as in Dorset. In other counties they have risen from 10s. to 13s. and 14s., as in Norfolk. In my own county, Warwickshire, the increase has been from 11s. to 15s. and 16s. ; in Wiltshire, from 9s. to 12s. and 13s. ; and in Lincolnshire, from 12s. to 16s. 6d., and 18s. In other counties, where the power of Unionism has been felt, the above-named wages have been obtained, and, as a rule, retained, employers being only able to effect a reduction where the labourers have been disorganised. It has been computed that four millions sterling more have been paid to the labourers during the last four years than were paid in the four preceding years. I cannot vouch for the statement as correct, because I have not gone into details on that point ; but I have every reason to believe that it is true. The increased pay obtained has brought more comforts to the houses of the labourers than they ever enjoyed before. Better wages have reduced pauperism in the rural districts, the number of paupers being about 323,000 less, and the poor rates having fallen from 8d. to 3½d. in the pound. At Guildford, Blandford, Warwick, and in every district where the better pay has been given, the like results have fol-

lowed—of course, in proportion to the intelligence of the county, as the men are better educated in some counties than in others. Take Sussex, where the education of the labourer has just been what the squire and parson have allowed it to be, where any radical publication was denounced as sedition. That despotism has had its day ; and I hope, sir, that in the paper you are about to submit to the intelligent Americans you will not forget to mention that, with increased wages and home comforts, the English labourer has increased in intelligence.’

Mr. Clare
Sewell Read

It is necessary, in order to complete this statement, to refer to the situation in which the farmers are placed. While wages have advanced, they have had to contend with the most disastrous seasons within the memory of man. On January 14, 1876, Mr. Clare Sewell Read, M.P. for West Norfolk, made an important speech, which was quoted in the ‘Economist.’ ‘He and his friends had only a poor crop of corn ; their roots were the worst he ever remembered to have seen grown in Norfolk. The hay crop had been exceedingly light, and had been secured in very bad order ; and even the straw, which they thought of great value, was so indifferent that, when it was threshed, it broke all to pieces. When he came to speak of prices, he considered they were ruinously low, having regard to the yield per acre. Prices did not apparently depend upon the amount of corn which was grown in the country, but upon the quantity of grain which foreigners were pleased to send us, and which would increase year by year. If the farmers had another year like that of 1875 he fancied they would see even longer and more dolorous faces than those now before them. Farmers might stand one such blow, but they could hardly face another. If he were

to sell every bushel of corn which he grew in 1875, the proceeds would not much more than pay his labour bill and half his rent : and as he should have to expend a further amount for artificial manures, he would leave the meeting to guess upon which side his banking account would be likely to stand after he had paid his rent, as he had done that day.'

Philanthropic men have sought to reconcile the apparently hopeless conflict between capital and labour by the introduction of the so-called co-operative system. The nature of the experiment will be too familiar to your readers to make it necessary that a detailed explanation should be given. It will be sufficient to point out where the principle has been adopted with success, and where it has been marked by failure. It has been a success where the business was easy to manage. At the co-operative retail stores great reductions of price and improvements of quality have been secured to the consumers. Co-operation has been a failure in its application to productive industry. In a large factory, or mine, or foundry, where the labours of hundreds or thousands of men must be combined, discipline must be maintained, and the reasonableness of the orders given must be accepted without debate. The government of a factory, like the command of a regiment, must be an autocracy. Again, capital is required for such undertakings. Competition has reduced the profits of manufacturers so considerably that an establishment, unprovided with the newest and most costly machinery, must show an adverse balance. Unfortunately, the savings of the working classes are not sufficient to enable them to provide the capital necessary for business on a large scale.

Co-operation
for pro-
duction

There is, however, another and a more practicable

Payment by
results

form of co-operation, namely, that of payment by results. During the past winter this subject has excited much interest in consequence of the protracted strike of the workmen belonging to the Amalgamated Society of Engineers, who were in the employ of Messrs. Easton & Anderson, at Erith. It had been specially urged by the officers of the society, first, that the practice of piecework placed the men under the tyranny of what was called the 'butty,' or piece-master system, and that the workman, under this system, did not get his share of the results, as it was monopolised by the piece-master. Secondly, that it frequently happened that workmen actually found, at the end of a job on which they had been engaged, that they were in debt to their employers, inasmuch as they had not earned the full amount of their weekly rated wages, and were forced to pay the deficiency. Thirdly, that the results, even when equally distributed, were small in amount, and that actual earnings were reduced. Their experience showed that wages were brought down by this process to the lowest possible point. These allegations have been carefully examined by Mr. Stark, Fellow of the Statistical Society of London. The result of careful inquiry shows that of ninety-seven employers, from whom information was obtained, only fifteen pay through a piece-master; that a deficiency hardly ever happens, and that the additional earnings vary from 15 per cent. to 75 per cent. on the weekly ratings. The lower earnings are exceptional, and are confined to small concerns. The weekly ratings are higher in districts where piecework most obtains than where it is never practised, while the percentage additions on piecework balances are highest in those shops where the weekly ratings of the men are also on the highest scale. It would therefore appear that the best workmen are found where piecework is the established practice.

While piecework is strongly resisted by the Association of the Amalgamated Engineers in its corporate capacity, and by a certain proportion of the workmen is much disliked, in many important districts the men, who have learned its value to the able and industrious mechanic, would strenuously oppose any proposal to limit its operations. Piecework has been strongly advocated by the most generous friends of the working classes. Among their number I would specially refer to Mr. Mundella. He has effectively demonstrated the necessity for maintaining the principle of rewarding labour according to results. Speaking in London on March 20, he said : ‘ He was an advocate of piecework. Of the 240,000,000*l.* a year of English exports, he believed he was right in saying that fully 90 per cent. were made by the piece. Of textile manufactures they exported, in 1874, 120,000,000*l.* worth, and these had all been paid by the piece. So it was with iron and steel, to the extent of 31,000,000*l.*, and also with coal, cutlery, haberdashery, and other small articles, all of which, so far as practicable, were produced under the piecework system. There was more piecework, he maintained, done in England than in any other country in the world, and the more it was extended the better for the workmen, whether they liked it or not. Scamping was as often done under the daywork as under the piecework system, for the master could push the men under both, and urge them to “slip” it. The question on that point was, What amount of money was the master prepared to pay, and what superintendence did he give as to quality? Piecework tended to regularity of work, and the weak were better off by it ; for, in slack times, these were, under a daywork system, the first to be dismissed. In conclusion, he made his earnest protest against any

attempt to resist piecework where it was honestly practicable.'

Comparative
efficiency of
labour

The comparative efficiency of the English and the foreign workman has been much discussed in the present hard times. The subject is always debated when trade is depressed. The truth is that there is little difference between the amount of work performed for a given sum of money in any of the manufacturing countries of Europe. The English workmen became idle when their wages were raised and their hours of labour curtailed. I have faith in their skill and physical power, and in their common sense. They are not likely to allow themselves to be beaten in a fair and open competition. The best evidence of the excellence of the British workmen is afforded by the high tariffs which, in order to give effectual protection to native industry, it is thought necessary to impose, in many countries, where the wages are lower and the hours of labour longer than with us. If there were no protective duties, our ironwork would be found in use in France, in Russia, and in the United States, whence now it is only excluded by prohibitive imports.

The present depression of the iron trade is not confined to England. The 'Economist' gives a gloomy picture of the state of this trade on the Continent. In Germany there has been over-production. Wages have risen as rapidly as in England. Good workmen have become careless; and the general standard of diligence and workmanship has declined. In Belgium, more than half the blast furnaces are standing idle. It is evident that the condition of foreign industries is very far from encouraging, and that we are doing better in England. 'Our faith,' then, 'is large in time.' While the growing mechanical genius of some countries may make them independent of England, other markets will open out

elsewhere. We know not what may be the future demand for our production in Japan, in China, and in Africa.

In discussing the condition of the labour question in England, it has been impossible to suppress all allusions to the industrial competition between our country and the United States. We are now rivals only in the arts, the sciences, and commerce, which confer so many blessings on mankind. The people of England and the United States are bound together by many ties; by their common ancestry, by their language and literature and by the laws and the liberties they enjoy. The natural attachment, which ought to unite them, was never more sincere; nor are there any clouds visible on the farthest horizon to overshadow the pleasant prospect of amity and peace which the friendly relations of the great Anglo-Saxon nations so happily afford.

Relations
with United
States

V

ON TRADES UNIONS

PAPER READ BEFORE THE TRADES UNION CONGRESS,
LEICESTER, SEPTEMBER 21, 1877

BEFORE entering upon more important topics, I desire to express my high appreciation of the honour of being invited to address the delegates from the Trades Unions at their annual congress. Connected as I am with the employers of labour, you cannot expect me to come here to encourage an aggressive movement against men of my own order. All that you can fairly ask is that I shall hold in my hands the equal scales of justice as between capital and labour. I have before had occasion to vindicate the character of the English workman from unmerited strictures. I hear the same charges renewed to-day, and again I ask for evidence to prove that the English workman is deteriorating. And, first, let us ask ourselves, has the volume of our trade diminished while that of other nations has increased? This question may be satisfactorily answered by a reference to Mr. Leone Levi's 'History of British Commerce.' It is there shown that while we export produce and manufactures of the value of 6*l.* 3*s.* 2*d.* per head of our population, France exports at the rate of 2*l.* 18*s.* 8*d.*, and Italy at the rate of 1*l.* 4*s.* 8*d.* per head. Our trade doubled itself in the fifteen years 1855-70. The exports and imports in 1870

Alleged deterioration
of British
workmen

amounted to 547,000,000*l.*, and the progress has been so well sustained through the period of depression, from which we have not yet by any means emerged, that in 1876 the total amount had grown to 631,000,000*l.* Mr. Levi very truly observes, in commenting on these remarkable figures, that what gives an open market to British merchandise all over the world is its universal adaptation to the wants of the populations of every climate. Luxuries are useless to the masses of mankind, but calico, iron, and hardwares are necessaries even to the least civilised peoples. The demand for these articles of universal necessity would not be supplied almost exclusively from England unless our labourers were, as he says, 'really good workers.' Wages may be higher here than elsewhere, but the labour performed is cheaper from its greater effectiveness and from the saving of unnecessary supervision.

We may now examine the effects of recent treaties of commerce on international European trade. A valuable paper on this subject was read by Mr. Leone Levi, in December last, before the Statistical Society. Let us take the trade between the United Kingdom and France. By the Treaty of 1860 France engaged to abolish all prohibitions, and to admit certain articles of British manufacture at duties not exceeding 30 per cent. *ad valorem*, to be further reduced to not exceeding 25 per cent. in October 1864. Great Britain, on the other hand, consented to abolish duties on French silks and other manufactured goods, and to reduce the duties on French wines. What have been the results of the treaty? While our imports from France have risen from 17,000,000*l.* to 47,000,000*l.* our exports to France, in spite of the heavy duties to which our goods are subjected, have increased to the extent of 185 per cent. These

Treaties of
Commerce

figures show both the growth of our trade generally and the ample share of advantage which we have secured under commercial treaties. That success could not have been attained except by the co-operation of skilful labour with well-directed capital. The English workman may therefore claim to share with his employer the merit due to that combination of cheapness of cost with excellence of quality, which has secured for us the pre-eminence we enjoy in the export trade of the world.

Relations
between
capital and
labour
abroad

Grave faults are imputed to our working classes, and their conduct in many instances deserves censure. If we look abroad we hear exactly the same complaints under the same circumstances. For information on the relations between labour and capital in foreign countries, I would refer more especially to the admirable reports of our Secretaries of Legation and Consuls. The relative value of labour in Europe and America has been exhaustively investigated in a recent official publication by Mr. Young, the Chief of the Bureau of Statistics of the United States. A few details may be appropriately quoted. Sir Henry Barron, in a report for 1872, thus describes the condition of Belgium. In a period of unexampled prosperity, the deposits in the savings banks showed a considerable decrease. Again, while pig iron doubled in value in six months, the prices of labour and materials rose to such exorbitant rates as to absorb the whole profits of the trade. The zinc, glass, and woollen industries have passed through crises of equal severity.

We have a similar report on the industrial situation in Germany. During the period of universal inflation, between 1871 and 1872, wages were advanced not less rapidly than in England. It was a period of immense profits all round. The make of iron was increased from

1,500,000 tons in 1871 to 2,250,000 tons in 1872. The prices of coal and pig iron advanced 100 per cent. The rise of wages in all branches of trade was 37 per cent. over the average of former years, and the prices of all the raw materials of industry were 50 per cent. higher. Unhappily, this great prosperity brought about no permanent improvement in the condition of the industrial classes. High wages and the large profits of manufacturers caused a general rise in prices. The cost of living was increased, and money was more freely expended in intoxicating liquors. I must confine myself to a single example in order to show the alternations of misery and want experienced by the workmen. The case is taken from the report of Mr. Savile, Chief Clerk of the Treasury Department of the United States. He there describes how, at Chemnitz, a great manufacturing centre in Saxony, the advance of wages from 1870 to 1872 was accompanied by a still greater advance in the cost of living. When the commercial reaction ensued, wages fell 25 per cent. There was no corresponding fall in the price of food, and widespread misery was the inevitable consequence. The meagre dietary of the people did not include meat more than once a week. A few touches will sometimes produce the most striking effect in a picture ; and an audience of English workmen will probably appreciate most fully the low standard of living to which the people had been reduced when it is mentioned that Mr. Savile refers in hopeful terms to the establishment of a market at Chemnitz for the sale of horse-meat, which, being comparatively cheap, gave them more for their money, or enabled them to get meat oftener than formerly. In the large towns of Germany a widespread though morbid spirit of disaffection to the political and the social organisation prevails. The socialist agitation

Industrial
situation in
Germany

is described as a purely negative opposition to the existing order of things, and to every proposal of reform. It opposes popular education, and it is indifferent to political progress. The only exception to this negative policy is the tendency to encourage strikes. It is not necessary to insist at greater length on the existence of troubles elsewhere. The burden we have to bear is not lightened because a heavier load is imposed on others. I shall therefore proceed to examine the statement, so often repeated, that labour is dearer in England than on the Continent.

Wages and
cost of pro-
duction

It is assumed that, because the scale of wages is higher, a corresponding difference must be found in the net cost of production. It is certain, however, that low wages do not necessarily imply cheap production. Allusion has already been made to the melancholy condition of certain branches of trade in Belgium. In that country the wages of the mill operatives have been reduced so low as scarcely to cover the cost of subsistence in cheap seasons, while in dear seasons the workman is embarrassed with an inevitable deficit. Not more than 40,000 workmen in the whole country have accounts at the savings banks. Hitherto, in those trades where we are exposed to foreign competition, the English workman has, in the main, performed an amount of work fully proportionate to the difference of wages in his favour, and the fact that we are running a close race in some branches of trade with a country where higher wages prevail than those earned in England is a proof that the cost of labour is not correlative with the scale of wages.

The United States afford some striking illustrations of the extent to which the influence of a high rate of wages on the cost of production may be neutralised by superior organisation, by superior industry in the worker,

and by the substitution of mechanical for manual labour. The small arms for the Turkish army have been largely supplied from the United States. The ability of the Americans to compete with the makers in this country in the manufacture of an article in which so much labour is employed is a significant circumstance. In cases where the raw material is the largest factor in the total cost, as, for example, the timber in a wooden ship, it might have been readily understood that we, who have no virgin forests, should have been unable to build wooden ships as cheaply as they can be produced in Canada or New England. In the manufacture of small arms there are no circumstances which are specially favourable to the United States. Mr. Stanley James, quoted by Mr. Young, calculates the wages of mechanics in the Eastern States and the large cities of America generally as 100 per cent. higher than in England. Mr. Lowthian Bell, in his report on the iron exhibits at the Philadelphia Exhibition, gives the following table of daily wages as the result of many inquiries in 1874 :

Wages and
cost of work
in United
States

—	United States			North of England
	Highest	Lowest	Average	Good men
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Carpenters .	12 3	5 7	9 0	5 0
Smiths . .	13 2	6 2	9 5	6 0
Bricklayers .	18 10	7 6	12 3	5 6
Machinists .	11 3	7 6	8 3	5 10
Enginemmen .	—	—	6 6	5 6

In America, as in England, it will be observed that the building trades are disproportionately paid. The reason is the same in both cases. The demand is essentially local, and wages are given which could not be sustained if the price could be determined upon a balance

of demand and supply distributed over a wider area. In all trades which are subject in any degree to the influence of foreign competition, the American workmen are conscious of the necessity of working hard and well in order to keep up the high wages that they are at present earning. I do not shrink from telling the representatives of English labour whom I see before me that any rules and regulations, whereby the native vigour of the British workman is restrained, must in the end prove fatal in their consequences. The effects are less baneful, in a commercial point of view, in the building and other trades, which are not brought face to face with foreign competitors. When, however, we consider that improved dwellings are urgently needed for the working classes, the unwisdom of imposing rules and restrictions tending to augment the cost of building must be patent to all. Turning to the cost of labour in mines, Mr. Lowthian Bell gave a comparison, in 1874, of the net cost of labour in the coal mines in the United States and England. The American miners earned on the average 9s. a day. They worked for ten hours and extracted six tons of coals. The average earnings of the English miners were 5s. 2d. a day, spending about seven hours in the pit and six in actual work. This was equal to 1s. 2d. per hour, for which the quantity worked was about 11 cwt. Miners in the United States got about 13 cwt. and were paid 1s. 1d. an hour. It is admitted that this comparison is not complete unless the relative facility of extraction is taken into consideration; and the work is generally easier in America than in England. The fact remains that, while the daily earnings in America were greater, the hours were longer, and more work was done for a given sum of money.

Provided the necessity of keeping down the cost so

Cost of
labour in
mines

as to be able to compete with other producers is duly recognised, and the cost of living is not raised to such a point that the workmen are actually poorer than before, as in the case already quoted of the manufacturing population of Chemnitz, the working classes are clearly justified in seeking to better their condition. If they prefer to avail themselves of the advantages derived from an increased demand for their labour by shortening the hours of work, with a view to secure a little more leisure—leisure which, wisely used, will tend to raise their intellectual and moral condition—they are not more deserving of reproach than the successful employer, who wisely prefers to give less time to business and more to nobler things. In either case it is a question of fitness of opportunity. Most certain it is that a state of apathetic resignation is a condition very detrimental to the interests of capital, and truly melancholy to the labourer. In Mr. Young's volume the manufacturing population of Silesia is described as destitute of any aspiration to better their condition in life, while the monotony of their daily toil produces an inordinate longing for enjoyment. The United States Consul thus describes the people of Chemnitz: 'A stupid nature and dull ambition, with the inborn idea that they will labour all their lives, as their fathers did before them, make the working class of some portions of Germany perpetual slaves to poverty; and the day is very far off when they shall be emancipated from thralldom.'

Aims and aspirations of workmen

It is because it is so important to inspire workmen with the hope of bettering their condition that I have always advocated the principle of payment by results. My father entertained the firmest convictions on this point. Trades Unions object on the ground that payment by the piece leads to overwork and bad workman-

Payment by results

ship. The answer is, that whatever may be the particular form of payment, whether it be by piecework, contract, gratuities for extra diligence, or percentage upon profits, it is essentially necessary to give to the workman a personal motive for exertion. This must come from the prospect of participation in the profits which have been earned by his labour. His share in those profits should, of course, be proportionate to the amount of labour which he has contributed.

And now I turn to the consideration of certain facts to which we seldom find that allusion is made at Trades Union Congresses, but which in justice to capital it is my duty to bring into view. Have you at all realised how extremely moderate are the rates of interest on English investments? You cannot have a more conclusive proof of the cheapness of money than that afforded by an analysis of the dividends paid on railways. The share and loan capital of the railways of the United Kingdom forms an enormous total of 630,000,000*l.* The average amount of dividend or interest returned for 1875 is represented by the modest figure of 4·54 per cent. The rates of interest on preferential capital, being more uniform than the dividends on ordinary shares, afford the most accurate gauge of the average returns on any English investment, presenting no speculative features. The most secure form of preference is that known as debentures or debenture stock. The process of converting terminable loans into debenture stock has of late been going forward with rapid strides. The amount increased from 67,000,000*l.* in 1871 to 123,000,000*l.* in 1875. In the same period the rate of interest on these investments was reduced from 4·25 to 4·18 per cent. The fact that debenture stocks bearing only 4 per cent. interest can be issued by our railway companies at the

Interest on
investments.
Cheapness
of money

rate of 16,000,000*l.* a year must be a positive proof to the working classes that they are not overcharged for the use of capital. This fact might be established upon evidence of a still wider and more conclusive kind than that afforded by the prices of railway securities. We might refer, for example, to the average Bank rate of discount. The rate for each year since 1867 has been as follows : $2\frac{1}{2}$, $2\frac{1}{4}$, $3\frac{1}{4}$, $3\frac{1}{2}$, $2\frac{7}{8}$, $4\frac{7}{8}$, $4\frac{3}{4}$, $3\frac{3}{4}$, $3\frac{1}{4}$, and $2\frac{5}{8}$ per cent. If the secure profits of business had been greatly in excess of the Bank rate, there would have been less money on deposit, and higher rates would have been charged for banking accommodation. Do not forget the elementary truth in political economy, that it is when capital is relatively abundant, and labour relatively scarce, that wages tend to rise. Reduce the supply of capital, and the reward of labour must inevitably fall. Capital, except where it is invested in the permanent form of land or the plant and appliances of a manufacturing establishment, is absolutely free to flow into any channels which the investor may select. It will flow abundantly into those countries where, under equal conditions as regards security, the highest rates of interest are obtainable. There is an international competition for the use of capital. The New World, which offers to the working man an El Dorado of high wages, is bidding high for the use of the capital accumulated in the older countries of Europe. No less than 75,000 miles of railway have been constructed in the United States. A very large proportion of the enormous capital required has been raised in Germany and the United Kingdom, upon terms much more favourable to capitalists than are obtainable here. Setting aside the speculative stocks, the rates of interest obtainable in the United States, as compared with the United Kingdom, on a first-rate

security, may be taken to be as six to four. Fortunately for the English workman, considerations apart from the rate of interest make in his favour. If these did not exist, the depletion of capital in this country would become a very serious question.

While I have spoken of the faults of the workmen, in fairness I am bound to say that the present depression of trade cannot be laid wholly or indeed mainly to their charge. If we examine the recent labour movement historically, it will be seen that in order of time the inflation of trade preceded the inflation of wages. The demand upon the labour market became in consequence more and more urgent, and when, by the natural operation of supply and demand, the labourer had gained the command of the situation, he, in many instances, assumed a dictatorial tone, and gave a smaller return, both in quantity and quality of work, for the increased wages that were earned. The capitalist, on the other hand, must bear his own due share of responsibility.

Capitalists
are respon-
sible for
over-pro-
duction

In the discussions on the state of trade and the causes of the prolonged depression throughout the commercial world, constant reference is made to the exorbitant price of labour. We hear but little, however, of the larger share of blame which rests upon the capitalists, the employers of labour, and the investors and lenders of money, who overstock the markets and cause goods to be sold at ruinous prices, and who, by encouraging speculative building, have raised the wages of tradesmen to their present level. I express no opinion as to whether wages are reasonable in amount. It is sufficient to insist that the scale has been fixed by the demand on the part of the builder, and not by the artificial restrictions imposed by the Trades Unions.

Time does not allow of an examination of the facts

as presented to us in the whole field of industry. We will confine ourselves to the iron trade. In America the Iron trade
panic in the iron trade began in 1873. Mr. Lowthian Bell tells us that the ironmasters complain that the construction of railways had been encouraged in the period more immediately preceding the panic by the action of Congress. Millions of acres of the public lands had been given to the companies as an inducement to make railroads which were not needed. Upon this there supervened a disastrous crisis. The unduly rapid extension of railways caused an extensive demand for rails. The supply not being equal to the demand, and a heavy protective tariff being imposed on imported rails, the American ironmasters realised immense profits, and rapidly increased the rolling capacity of their mills to an extent not warranted by the permanent prospects of trade. The consumption of rails in 1872 was 1,530,000 tons, of which 1,000,000 tons were made in America. In 1875 the capacity of the rail mills had been augmented to 1,940,000 tons. In the interval, however, the construction of railways had been partially suspended, and the consumption of rails had been reduced to 810,000 tons. The capacity of the mills, having been increased to two and a half times the requirements, a collapse has ensued in the iron trade, from which there is no immediate prospect of recovery.

The experiences of the American ironmasters were repeated in the contemporary history of the British iron trade, though the fluctuations were less violent. The course of events is succinctly narrated in Mr. Lowthian Bell's report. The increased demand for coal and iron commenced in 1871. The increase amounted to $6\frac{1}{2}$ per cent. for coal, and 22 per cent. for iron. In pig iron production increased by 664,000 tons in 1871, and by

110,000 tons in 1872 ; the totals being for 1870—coals 117,000,000 tons, and pig iron 6,627,000 tons. The supply was still deficient, and the price of pig iron rose to 122*s*, 6*d*. in August 1872. In 1873 the average price of 115*s*. was maintained throughout the year. Meanwhile, production, in spite of the inducement to make the utmost possible quantity, fell off to the extent of 175,000 tons. The difficulty of obtaining fuel was the cause of the diminution. So brisk was the demand, that coke, which could be had for 12*s*. in 1870, rose to 42*s*. a ton in 1873. British consumers were competing in the market with foreign buyers. Labour rose at the blast furnaces 50 per cent., and the cost of production was increased fully one-third. In 1874 the reaction set in rapidly, and Cleveland pig iron receded from 115*s*. to 67*s*. 6*d*. In 1875 the price fell to 54*s*., the average for the year being 60*s*. ; but by this time a considerable economy had been effected in the cost of the manufacture, and a small margin of profit was realised. In 1876 a further reduction of wages took place ; and if the trade was nevertheless profitable, it was due to causes independent of the cost of labour.

Excessive
competition

To an unbiassed mind this brief retrospective narrative will scarcely support the assumption that the violent dislocations which have occurred were attributable to the action of the workmen. In every country, and in every line of business, the same tendency to over-trading has been manifested. A striking instance is presented in the case of the steam communication between Liverpool and New York. New companies have been established, and the fleets of the older firms have been enlarged. The construction of numerous costly vessels on the banks of the Clyde, vessels which experience has shown to have been superfluous, had more effect in

making labour scarce, and therefore dear, than all the machinations of the local Trades Unions. Again, the manufacturing industry of the country, especially in coal and iron, has been injured by the abuse of the facilities afforded by the Joint-Stock Companies Acts for the conversion of private into corporate enterprises. Mr. Gladstone has denounced in telling language the folly of investors, who deluded themselves with the belief that they could, as shareholders in a company, reap all the profits which had before been earned by trained and experienced manufacturers, who had spent their early lives in learning, and their maturer years in administering a complicated industry. In most cases the companies, on taking over the business from the vendors, expended large sums in additional plant and buildings. In order to find employment for their enlarged establishments, contracts were taken with no regard to price. In most cases the directors were without technical or practical knowledge, and could not know whether the tenders they were submitting were based on sound calculations. The same rashness has been displayed in the management of railways, both in America and in England. On this point the recent remarks of Mr. Sherman in the United States are worthy of observation. It was to meet the loss consequent on an imprudent lowering of rates that the men employed were asked to submit to a reduction of wages, which led to the strike and the conflicts of lamentable violence which have recently occurred. In England, as it was pointed out by Mr. Moon at the last half-yearly meeting, the accounts of the North-Western Company show a lower rate of profit per train mile than in any year since 1861. What is the cause? Is the working man responsible? No. The cost of coal has been reduced by 1s. 9d. a ton.

In the locomotive establishment a saving is shown of 50,000%. ; and it is only through the reduced prices of labour and materials that the effects of over-competition, for which the capitalists were responsible, have been diminished, and that the former rates of dividend have been maintained.

Objections
urged
against
Trades
Unions

This discussion of the labour problem must be brought to a close with a few general remarks on Trades Unions. It has been recently said by Sir Edmund Beckett, who gives expression to views very widely entertained—(1) that Trades Unions are a combination to do less work for the given wages ; (2) that they teach the fatal doctrine that it is the business of working men to do no more than the least they can be paid for. If these grave charges be in a measure true, assuredly they are not the whole truth. With regard to the second charge, if it be true that bad workmanship is advocated by Trades Unions, it must at least be admitted that the national reputation is still high for the production of many important articles, of a quality far superior to that obtained abroad. In textile industry the quality of our woollens, prices being taken into consideration, is unrivalled. In shipbuilding, machinery, and hardware we have an admitted superiority. We are practically monopolists of the unsubsidised traffic through the Suez Canal. The existence of Trades Unions must be accepted as a necessary consequence of the new phases into which productive industry has entered. We shall do more practical good by seeking to direct this important and extensive organisation into a useful channel than by denouncing the inevitable. The working classes must always be more or less in a state of uncertainty as to the profits which their employers may from time to time be realising. This must, however, be known in order to decide

whether they have a right to demand an advance of wages, or, what is the same thing, a reduction in the hours of labour. It is evident that the problem cannot be solved without an intimate knowledge of the state and prospects of trade. Highly qualified commercial advisers are needed to guide the deliberations of Trades Unions on these matters. It is not enough to understand the conditions of the labour market in this country. An international knowledge of the situation is essential. The organisation of the Trades Unions may be usefully employed for the purpose of obtaining reliable information from independent sources, both at home and abroad. As a practical suggestion, I would urge that ample salaries should be ungrudgingly paid to competent advisers. The utility of the Trades Unions need not be confined to the single question of wages. They may be employed to organise mutual efforts for improving the social condition of the working class. By their agency building societies may be established, co-operative distribution extended, and, what is far more difficult, co-operative production may be organised. You may help to provide rational amusements for the masses, you may facilitate technical education. You have shown in the present Congress that you appreciate your responsibilities in the watchful observation of legislative measures affecting the welfare of the people. You may act as peacemakers in the negotiation of terms of agreement between masters and men : you may use your influence in securing the observance of the conditions of a treaty or acquiescence in the decrees of courts of arbitration.

As a member of Parliament, I may claim that the course of recent legislation, in so far as it affects working men, has been marked by a generous spirit. The programme for the near future must include the abolishment

of imprisonment for debts to the amount of less than 50*l.* as recommended by Mr. Lowe, and the extension to seamen of the Employers and Workmen Act. When the Bill for regulating the liability of employers for injuries to their servants is again brought forward, Parliament will certainly not be wanting in consideration for the workmen. I am glad to learn that the Factories and Workshops Bill, which will be a prominent feature in the next Session, commands your hearty approval.

Let me conclude by expressing once more my gratitude for your kind invitation to be present at this Congress. To possess your confidence is an honour of which I am very sensible. It is one of the most regrettable incidents of the organisation of industry on a large scale, that the personal relations between employers and their workmen have become less intimate than before. In my own case the discontinuance of my father's business has deprived me of opportunities which I should have greatly prized of associating with the working class. Many prejudices may be removed by an honest interchange of ideas, face to face, in a spirit of conciliation, and with a mutual and sincere desire to reach the truth and to maintain justice.

VI

*ON THE COMPARATIVE EFFICIENCY OF
ENGLISH AND FOREIGN LABOUR*

ADDRESS DELIVERED AT HAWKSTONE HALL, WEST-
MINSTER BRIDGE ROAD, JANUARY 21, 1878

At the present time trade is dull in almost every department. Merchants, manufacturers, and the public, disheartened by a long period of depression, are oppressed with a vague dread of foreign competition. It is asserted that the English workman has become relatively more idle and less skilled, and that the cost of production has become so great that our goods are being displaced by the exportations of rival manufacturers abroad. Admitting that labour in this country has certainly become dearer and probably less efficient than before, and that it is the duty of the working classes and their advisers to grapple with the difficulties of the situation by practising thrift and by working better, I think it right to point out that the same complaints which are rife in our own country at the present time are heard in every great seat of manufacturing industry abroad.

While, however, the depression in the trade of other countries has been even more marked than that experienced in this country, the fact remains that in the markets for the chief commodities of our export trade, the decline is described in a recent number of the

Decline of
British
exports

'Economist' as steady, continuous, and serious. The price of pig iron has fallen from 80s. a ton in 1874 to 51s. 6d. at the close of December 1877. The price of coal is 18s. 6d. as compared with 30s. a ton at the end of 1874. Copper is 66*l.* as against 83*l.* 10s. a ton, and tin 66*l.* as compared with 94*l.* per ton three years ago. We see a corresponding fall in the prices of textile fabrics. While such a state of things is calculated to awaken gloomy forebodings for the future prosperity of our country, in which so large a proportion of the population is dependent on manufacturing industry, we are not alone in our misfortunes. The iron trade is in a state of unprecedented depression in France and Belgium. In Germany it is described by Dr. Leo de Leeuw, the eminent statistician, as one of the most prostrate industries of the Empire.

British and
foreign
trade
statistics

It has been represented that the falling off in our iron trade has been caused by the inflation of prices, and that that inflation is due chiefly to the rise of wages. If we have suffered from this cause in England, the same difficulty has presented itself on the Continent. The 'Zeitschrift für Schweizerische Statistik' has lately published some valuable papers by Dr. de Leeuw. The following extracts from this authoritative source have appeared in the 'Times.' 'In Germany between 1867 and 1872 the wages of file smiths were advanced from 60 to 100 per cent. ; file cutters got advances in the same period equal to 90 per cent., in some instances even more ; and the pay to workers in other trades was augmented by from 25 to 50 per cent. Yet, according to the unvarying testimony of the employers, the actual wages earned in 1872 and subsequent years were scarcely in excess of the wages earned before 1867. The workmen took the difference in idleness and dissipation ; in most esta-

blishments it became the rule to close from Saturday night till Tuesday morning, and it was only on Wednesdays that work was fairly resumed.'

Let us examine the condition of the textile industries from a similar point of view. The falling off in the exportations has led to numerous and doubtless inevitable reductions in the wages of the operatives. These reductions have been resisted, and the obstinate resistance of the working people has been severely condemned. It has been said that the influence of the Trades Unions threatens us with a permanent depression of our trade, and that our spinners and weavers no longer execute their task as well or as cheaply as the operatives of other countries. These allegations are not supported by the Board of Trade returns. No diminution is shown in our exports of cotton, linen, or woollen goods. Are the industries of other countries in an equally strong position? In France the exports in 1876 showed a decrease in value of 12,000,000*l.* when compared with those of 1875; and this falling off was on a much smaller total than our own. The total exports of British produce only in 1875 were valued at 223,465,000*l.* The total exports from France were 154,905,000*l.* in 1875, and 142,795,000*l.* in 1876.

Textile
industries

Some most interesting facts, as bearing on the comparative efficiency of English and foreign labour in the textile industries, are given in the last report of Mr. Redgrave, the inspector of factories. The number of spindles for each person employed in the cotton factories was seventy-eight in the United Kingdom, and only sixty in France. The proportion of adult males employed in the cotton factories of the United Kingdom is 40 and in France 50 per cent. of the total number of operatives. The report of Mr. Baker, the colleague of Mr. Redgrave, con-

tains extracts from the 'Annual Review of the Cotton Trade' for the season 1875-76, published by Messrs. Ellison & Co., of Liverpool, which ought to be reassuring to those who take a too melancholy view of our commercial prospects. 'Oddly enough,' observes Mr. Baker, 'while our manufacturers have complained so heavily of foreign competition, and have resorted to various means to produce goods at cheaper rates, the manufacturers abroad have been complaining of English competition in the strongest terms.' Complaints of the competition of cheap Manchester goods, offered at prices never known before, are heard in Sweden and Norway, Prussia, Saxony, Baden, Würtemberg, Alsace, Austria, Switzerland, Belgium, France, and Italy. In Baden it is reported that trade is expected to improve 'when politics are more settled, for then Manchester may find an outlet for her goods elsewhere.' In Switzerland, where the thrift and good conduct of the operatives have been so highly commended, the competition of English yarns and goods is spoken of as 'ruinous, not only in the home market, but in foreign countries to which Swiss goods are exported.' In Belgium, that land of low wages and a low standard of living among the operatives, sales are said to have been less easily made in consequence 'of the competition of English goods offered at low prices.' Here, too, manufacturers look forward to the settlement of the Eastern question, and the diversion of the Manchester goods, which it is expected will follow that event. In France, a really satisfactory trade is considered impossible until the pressure of English competition is relaxed.

The 'Times' correspondent, from whom I have already quoted, gives the following extract, which abundantly confirms Mr. Baker's encouraging view of the capabilities

of British industry : 'One of Dr. Leo de Leeuw's most striking comparisons is that between an English and a German cotton factory, the former situated in Lancashire, the latter in Saxony. The English concern is one of 63,900 spindles ; the Saxon establishment contains 22,000. In the larger factory 202 workpeople are employed, at a total wage outlay per week of 176*l.* The 130 employés of the smaller mill are paid with 80*l.* a week. Thus while the average earnings of the Saxon operatives were not more than 11*s.* 10*d.* per week, their English fellows, including, of course, women and children, earned 16*s.* 10*d.* each, a difference of more than 40 per cent. ; and the week of the English factory hand, be it remembered, is many hours shorter than that of the German *Arbeiter*. But the English establishment is nearly three times the size of the Saxon, and while the former is worked with 3·1 employés to every thousand spindles, the latter requires 5·99 to every thousand spindles, nearly twice as many. To put the matter in another shape, if both factories were of the same size, each containing 64,000 spindles, the annual disbursements of the German concern in wages would amount to 12,000*l.* against 8,800*l.* for the English establishment—a saving in favour of the latter at the rate of 3,200*l.* a year. If this comparison were carried further, it would doubtless show in other respects to the disadvantage of the Saxon cotton-spinning ; for if it costs more to build houses in Germany than in England, it also costs more to build mills, and increased rents must tell as heavily on the manufacturer as the householder. With these facts before us, we need not be surprised to learn the further fact that cotton-spinning in Saxony is fast becoming an extinct trade. It must not be supposed that wages in Germany and Switzerland are still as high, labour still as inefficient, as they were

for some time after the war of 1870-71. The bitter sufferings of the last two or three years have taught some useful lessons. Capitalists are less reckless, workmen more moderate, than they once were; but the cost of living is as yet not greatly diminished, and house rent yields with exceeding slowness to the pressure of the times. Millowners and merchants continue to curtail their operations.'

Protective
tariffs

The apprehension with which British competition is regarded is clearly indicated in the protective policy which every manufacturing country still maintains. From the return obtained last session by Mr. Fawcett, I quote a few figures to show the obstacles which British industry has to surmount. The tariff in the subjoined table is calculated in percentages *ad valorem*.

Articles	Countries			
	Russia	Germany	Belgium	United States
Cotton yarns .	38%	7%	7 to 19%	75%
Linen „ .	35%	1½%	Free	30 to 40%
Woollen „ .	13%	½%	2 to 4%	85%
Iron—				
Bar . .	50%	Free	5%	67 to 100%
Pig . .	28%	Free	5%	46 to 83%

When we examine the relative proportions in which English and foreign productions are exchanged in several of these countries, we shall see no reason to justify the hostile tariff which is maintained against our importations. It is in the neutral markets offered by the non-manufacturing countries, where our producers, trained in the bracing air of keen competition, compete with the artificially reared industries of other countries, that the advantages of our free-trade system are most conclusively displayed.

The barrier of hostile tariffs must be taken as a clear indication that the capabilities of English industry are appreciated much more highly by those with whom we compete abroad than by the pessimist critics at home. Small importations of goods of a special type or quality lead to a cry of alarm, as our home market had been monopolised by the dreaded foreigner. People seem to have no conception of the immense superiority of English industry, in point of extent, over that of every other competing country of our textile industry. In England the number of spindles at the end of 1874 was 39,000,000. The corresponding figures were—for Germany, 5,000,000; Austria, 1,500,000; Switzerland, 2,900,000; Belgium, 800,000; and France, 5,000,000.

In an article on foreign competition which has lately appeared in the 'Times,' it is clearly shown how difficult it would be for foreign competitors to displace us to any material extent. A capital of several hundred millions must be sunk in producing annually the 140,000,000*l.* sterling of goods exported from this country. But even 100,000,000*l.* would not be easily found in the whole civilised world, outside of England, for the erection of new works to compete with our manufacturers. It would take years to accumulate the amount of capital necessary for such a purpose. The displacement of labour would not be less difficult. Highly trained operatives are not made in a day, and there is no redundant supply of mechanical labour at the present moment in other countries. Again, the complexity, variety, and minute subdivision which are necessary in manufacturing enterprise on a large scale, give to England a conspicuous advantage. Our country is a vast workshop, fitted with the most complete appliances of every sort.

The recent strike among the shipwrights on the Clyde

Strike in
shipbuilding
trades on
the Clyde

is one of the most regrettable incidents in the labour movement of the past year. Shipbuilding has been a most progressive and distinctively national feature in the modern industry of our country, and on the banks of the Clyde it has been carried on to the highest degree of perfection. The finest ships, whether for war or commerce, to be found in the fleets of our maritime rivals have been built on the Clyde. During the past year a serious falling off is seen in the amount of tonnage built. The fluctuations in the shipbuilding on the Clyde have been recently detailed in 'Engineering.' 'The amount of shipping launched during 1877 was the lowest that has been recorded during the last ten years—in all 228 vessels, of an aggregate of about 168,000 tons; whereas in the year 1868 the total tonnage launched amounted to about 170,000 tons. From that year onwards there was a somewhat steady rise each year, until we come to 1874, when the largest total ever yet reached was launched, namely, 266,800 tons. The falling off, as compared with the launches in 1876, is nearly 37,000 tons, and fully 60,000 tons as compared with the year 1875, while it is nearly 100,000 tons as compared with the turnout in 1874, a sort of *annus mirabilis* in the Clyde shipbuilding industry.'

Strange to relate, it was at a time of such unprecedented depression that the shipwrights made a demand for an advance of wages. Their request was refused, and they went out on strike. All the other trades connected with shipbuilding followed their example. No less than 10,500 men were, in consequence, thrown out of work. The loss in wages amounted to 150,000*l.*; the loss to the employers has been estimated at 300,000*l.* Eventually the dispute was referred to arbitration. In this case the workmen were clearly in error. The yards

were full of orders, but the contracts had been taken at low rates. Shipowners had been tempted to lay down new ships only by the low prices at which they could be built. Profits had been reduced to a minimum. In numerous instances a loss would have been sustained, even if wages had remained at the rates current when the contracts were taken. It is not true, however, to say that the misconduct of the shipwrights is the only cause of the depression in shipbuilding. Neither is it true that the business of shipbuilding has been transferred to other countries. The construction of iron steamers, which has languished in this country, has been almost entirely suspended abroad. In point of fact, the amount of shipbuilding has for some years been in excess of the demand in the carrying trade. Several large companies have pursued a reckless course in adding too readily to their tonnage. If the action of the workmen had never been open to question, the shipbuilding trade must have been rendered by over-competition comparatively unprofitable and inactive.

It must be admitted that the suffering due to general depression was needlessly aggravated by the recent strike. The remonstrances addressed to the operatives in the textile industries by the writer of the article in the 'Economist' of December 29 may be addressed with equal justice to those employed in shipbuilding and all other branches of industry in the like condition. The operatives know that there is a stagnation of trade. They know that a reduction of prices is the immediate consequence of a diminished demand. When prices fall they know that a fall in wages must ultimately follow. To prevent the fall in prices they advocate a diminution of production. They say, 'Let us work short time and keep wages at the old rate.'

Assuming that an excess of tonnage had been built, the shipwrights on the Clyde might have argued that it was for the interest of all concerned to suspend for a time the construction of new ships. But this remedy, as the 'Economist' points out, is costly in the extreme. The same line of reasoning has been pressed in the cotton trade. Where the earnings of a family of operatives are 60s. per week, a reduction of one-third of the time involves a loss of at least 18s. a week. Yet this solution is preferred to a reduction of 10 per cent. or 6s. per week, as proposed by the masters.

It is further to be observed that as it has been by cheapness of production that England has attained such a decided pre-eminence in the export trade, so it is by that further economy of production, which might be effected by a temporary reduction of wages, that our power of competition would be most securely maintained, and new markets opened out. Let us apply these general principles to the particular industry of shipbuilding. We are engaged in a close competition in the carrying trade by sea, for all the less valuable descriptions of goods, with the mercantile marine of Northern Europe. By availing themselves of an interval of depression to build sailing ships and steamers at an exceptionally low rate, our shipowners might have created a considerable tonnage with a smaller capital than before. With cheaper ships they could afford to accept lower rates of freight, and could thus compete with the foreigners in branches of the carrying trade from which they have hitherto been excluded. First-class sailing ships can now be built at from 12*l.* 10*s.* to 13*l.* a ton, with a full outfit; while cargo steamers, with compound engines, can be built at from 15*l.* to 17*l.* per gross register ton. The present time therefore presents an opportunity to

capitalists who can afford to await the turn of the tide ; and orders will be given because prices are low. Is it not more advantageous for the workmen to accept employment at reduced rates rather than remain idle, or partially idle, during an interval which may perhaps be of considerable duration ? If they insist on the wages they were earning in the prosperous period through which we have lately passed, their employers can make no reduction on the former prices for ships ; and at those prices it is quite certain that at the present time only a few ships, for certain special trades, would be constructed.

While I have endeavoured to remove needless apprehensions for our industrial future, I am far from saying that no errors have been committed by masters and men. The sharp lessons of adversity may tend to dissipate many delusions. 'The present bad times,' as the 'Economist' has truly said, 'are their own most permanent and certain cure.'

In this point of view, perhaps nothing can be more instructive than an examination of the state of the labour market in the United States. It has been ably described by Mr. Plunkett in his recent report on the railway riots in America. In America universal indulgence has been permitted in that extravagance of living which has been so justly and so severely criticised in England. Nearly every household, from the top to the bottom of the social ladder, has been more or less recklessly managed. While the prices of almost all kinds of food have been no higher than in England, it was considered in America that 24s. a week were the lowest possible wages for which a labourer could support himself and his family. It was an inevitable result of this extreme dearness of labour that all articles in the production of

Lessons to
be gleaned
from industrial
position
in United
States

which labour was an important factor were extremely costly. Take, for example, the two important items of fuel and house rent. A comparative statement from Dr. Young's 'Labour in Europe and America' gives the following figures :

—	Germany		United Kingdom		New England		Middle States		Western States	
	<i>d.</i>	<i>c.</i>	<i>d.</i>	<i>c.</i>	<i>d.</i>	<i>c.</i>	<i>d.</i>	<i>c.</i>	<i>d.</i>	<i>c.</i>
Coal, per ton . . .	6	70	3	84	8	95	5	43	6	30
Four-roomed tenements	5	90	4	14	5	85	10	22	9	12
Six " "	9	90	5	97	7	45	14	52	16	90

Mr. Minot, the author of a paper on Local Taxation, read before the American Social Science Convention at Saratoga, attributes the increase of personal extravagance to the Legal Tender Act. It was decreed that a piece of paper, on which the Government has inscribed a promise to pay, should be accepted as a dollar. The whole country acquiesced in the fiction. Everybody who had a gold or silver dollar soon found that he had two dollars for the one in paper ; and everybody, computing his property as having at least doubled in value, began to live accordingly. Since 1873, however, a change has come upon the spirit of this dream ; and, with a quickness of apprehension which could hardly have been displayed in an old country, the American people are adapting themselves to the altered situation. 'Incomes, wages, and expenses,' to use the language of Mr. Wells, 'are being scaled down.' Profits are reduced. The rate of interest on capital has fallen. The future prosperity of industry, we are told, is to depend more upon economy than upon large profits. The American labourer has to make up his mind that he will not be so much better off than the European labourer. It will

be harder for him to cease to be a labourer, and to become an employer of labour.

Mr. Archibald, our Consul-General in New York, gives particulars as to the fall which has taken place in wages in every State of the American Union :

‘ Railroad wages.—The average percentage of reduction varied from 21 per cent. for firemen, to 37 per cent. for trackmen.

‘ Building trades wages.—The average percentage of decrease varied from $28\frac{1}{2}$ per cent. to 50 per cent.

‘ For other classes of labour, as specified.—The average reduction was nearly twice as great as the average railroad reductions. In the oil refineries and yards about New York, where a great many men of different trades are employed, including coopers, ship carpenters, house carpenters, and machinists, the reductions of wages since 1873 have been about 25 per cent.’

Details as to the fall of wages are given by Mr. Plunkett from several sources. At Cincinnati, in Ohio, in 1872, the rate paid to the common labourer was one dollar 50 cents (equal to 6s.) per day. The present rate is one dollar a day. This gives a reduction of $33\frac{1}{3}$ per cent. The reduction in the wages of mechanics has been about equal to that in the wages for unskilled labour. Turning to the cost of living, the reduction has been fully proportionate to the difference in wages. Since 1872, coal has fallen 50 per cent., rent 35 per cent., clothing 50 per cent., house furnishing goods have declined in value fully 40 per cent., furniture 35 per cent., glass-ware 35 per cent., cutlery 25 per cent., and crockery 20 per cent. Table expenses having remained the same, the reduction in the cost of living in the last five years is not less than 30 per cent. Hence, with wages reduced only about 35 per cent., the

working men who are fully employed are not severe sufferers.

The leaders of our Trades Unions, who too often commit themselves, in unprosperous times, to a stubborn resistance to a reduction of wages, may study these figures with much advantage. They will see that the maintenance of high rates of wages all round is not an unmixed benefit to the people at home, while it must certainly affect prejudicially our power of competition abroad. A general advance of wages means a general rise of prices ; and it is obvious that if that advance of prices be such that the increase in the cost of living up to a given standard absorbs the increase in wages, the rise of wages has conferred no practical benefit on the workmen. Conversely the fall in wages may be fully compensated, as in America, by a proportionate reduction in the cost of living.

These figures should convey a most instructive lesson to our working people. I have on many occasions shown that the cost of production cannot be determined by the nominal rate of daily wages, and I have never been alarmed for the future of the industry of the United Kingdom simply because wages on the Continent of Europe were so much lower than in this country. I have been much more impressed with the capabilities of the manufacturers of the United States. In America labour has, until a recent period, commanded the highest rates of wages. The scarcity and the cost of labour have stimulated to the utmost the ingenuity of our intelligent and enterprising kinsmen across the Atlantic, who have all the qualities of the Anglo-Saxon race and a boundless field for their development. Labour-saving machinery, and mechanical skill generally, have thus been brought to great perfection. With high wages, and all the

obstacles to trade which an extreme protectionist system presented, the cost of many articles has been brought down to a level which has enabled American manufacturers to compete successfully with our own producers. I will give a striking case as an illustration. The locomotive manufacturers of Pennsylvania have supplied engines to all the railways of South America, and I believe to our own Australian colonies also. It would seem at first sight incredible that our engine builders should have been beaten in a neutral market with no hostile tariff. It would at least have been expected that if we were beaten it would have been by the Belgians or the German makers, who command an ample supply of labour at comparatively low rates. The contrary, however, has happened; and it is a country where labour is paid at rates unknown in the Old World, which has conquered, by the mechanical skill of the employer in devising labour-saving machinery, and by the industry and energy of the workmen, who, if they have earned high wages, have worked longer and more industriously than many among our own mechanics have been disposed to do. If our workmen allow themselves to be deluded with the notion that by working at half speed they will prevent over-production, British industry cannot contend successfully against the free and vigorous efforts of our kinsmen in America. The only result of such a suicidal course must be that the people who impose no artificial restrictions on their powers will take our place in every open market.

In conclusion, may I say that I offer in no narrow and selfish spirit these suggestions to the consideration of my fellow-countrymen whose lot it is to labour and to earn their bread by the sweat of their brow? We must accept it as an inevitable development of the near

Conclusion

future, that other nations will participate in increasing proportions in trades which once seemed destined to be the monopoly of the United Kingdom. Would it be a thing to be desired that our island should become the universal workshop of mankind? Would it add to the felicity of its inhabitants that the population of this huge metropolis should be doubled in number? Would you wish to see all Lancashire and Yorkshire honey-combed with coal-pits, every hill crowned with a monster manufactory, and the black country of Wolverhampton enlarged to twice its present limits? Is it not better that we should share with other nations in the development of those industries which, however admirable they may be as illustrations of the skill and energy of man, inevitably involve the destruction of much that is fair and lovely in nature? A life without trees, and flowers, and blossoms, which no breeze from the hills or the sea ever refreshes, is a life imperfect, and wanting in the purest and the best pleasures which it is given to man to enjoy.

I heard a thousand blended notes,
 While in a grove I sat reclined,
 In that sweet mood when pleasant thoughts
 Bring sad thoughts to the mind.

To her fair works did Nature link
 The human soul that through me ran;
 And much it grieved my heart to think
 What man has made of man.

Let us, then, abandon the vain idea that it is an irreparable misfortune for our country to share with others in the development of the commerce of the world. Let us study the situation in a spirit of generosity to the foreigner, and of justice to our own people. Montesquieu has well said: '*L'esprit de commerce produit dans les hommes un certain sentiment de justice exacte, opposé*

d'un côté au brigandage et de l'autre à ces vertus morales qui font qu'on ne discute pas toujours ses intérêts avec rigidité, et qu'on peut les négliger pour ceux des autres. Le commerce rend les hommes plus sociables, ou, si l'on veut, moins farouches, plus industrieux, plus actifs ; mais il les rend en même temps moins courageux, plus rigides sur le droit parfait, moins sensibles aux sentiments de générosité.'

It may be that the young men and women of the present and of coming generations may be required to go forth in augmented numbers to earn their livelihood in other lands. Such a contingency may be contemplated without regret, if our sons and daughters carry with them an affectionate memory of the mother country. In the Antipodes or the New World, under the Union Jack, or it may be beneath the Stars and Stripes of the American Union, I see before me a glorious vision of the growth of the Anglo-Saxon race. I see new nations rising up, speaking our language, and educated in our literature, bound to us and to one another by the closest ties ; and I see, in this wider distribution of our race, more individual happiness, and a surer basis for our greatness as a nation, than in the concentration of a redundant population within the narrow limits of their ancestral island home.

VII

*ON THE RISE OF WAGES IN THE
BUILDING TRADES OF LONDON*

PAPER READ BEFORE THE ROYAL INSTITUTE OF BRITISH
ARCHITECTS, FEBRUARY 4, 1878

THE present paper has been prepared in compliance with an invitation of long standing, which I esteem it a great honour to have received. The delay in the preparation of the following statement is due to the pressure of many engagements, and to my protracted absence on a voyage of circumnavigation. Even now I should have been quite unable to have performed my task without the aid and co-operation of others. I have little spare time for such an investigation, and I have no technical knowledge. Under these circumstances I appealed to gentlemen whom I knew to be thoroughly conversant with the subject, and I gratefully acknowledge their readiness to assist me. Being anxious to collect the information required from impartial sources, I applied to Messrs. Hunt & Stephenson, the well-known surveyors; as representatives of the builders, I communicated with my old friends, Messrs. Lucas Brothers; and lastly, with a view to obtain a fair statement on behalf of the workmen, I asked the co-operation of Mr. Howell. These gentlemen, therefore, are in point of fact the authors of the following paper. If it possesses any

Sources of
information

importance as a contribution to the sum of knowledge on that labour movement which constitutes one of the most urgent questions of our time, it is to the practical authorities whom I have quoted that its value must be attributed.

To the Council of this Institute belongs the credit of suggesting that a review of the alteration in the rates of wages in the building trades should be prepared. It is only by bringing into view the fluctuations in prices during a tolerably extended period that the relation between cause and effect can be satisfactorily traced, and principles laid down for the future guidance of masters and men. It was truly said by Lord Bolingbroke that history is philosophy teaching us by examples how to conduct ourselves in all the struggles of public and private life.

I begin by giving a statement of the increase of wages and reduction of working hours in the building trades in London from 1837 to 1847. The current wages of building operatives in London from the year 1836 was 5s. per day of ten hours, or 30s. per week of sixty hours. This rate was generally adopted, but it was not universally paid in all branches of the building trades until 1847. It was only established as the standard rate by dint of protracted efforts, extending over a period of several years. Masons and bricklayers were the first to secure the advance. Carpenters, plasterers and painters followed their example.

In the year 1847 a movement was set on foot for a reduction of one hour and a half on Saturdays, the men leaving work at four o'clock. This agitation seems to have originated from the idea of the Saturday half-holiday, promoted by Lord Shaftesbury and other eminent philanthropists. After a comparatively short struggle the hour

Wages in
London,
Statement
by Mr.
Howell, M.P.

and a half was conceded ; and it soon became general for all branches of the building trades to leave work at four o'clock on Saturdays. Only one master persisted in refusing this boon, and he was ruined for his obstinacy.

In the year 1853 an effort was made to obtain a reduction of time to nine hours a day. The men were offered a rise in wages of $6d.$ per day, which was accepted, and the nine-hour agitation was abandoned. The $5s. 6d.$ per day was not universally conceded in all branches of the building trades for some years, although the leading firms gave it to the majority of their workmen.

In 1857 an agitation was recommenced for the Saturday half-holiday. This was abandoned in 1858, and a limitation of the hours of work to nine hours a day was accepted instead. In 1859 the movement in favour of the half-holiday was again resumed, and the demands of the men being refused, a strike ensued, which was followed by a general lock-out of the building operatives in London. Eventually, in 1861, the masters introduced the hour system, payment being made at the rate of $7d.$ per hour. A reduction in time was obtained of two hours on Saturdays, the men working through the dinner hour, but leaving work at one instead of four as formerly. In 1865 a rise of $\frac{1}{2}d.$, making the wages $7\frac{1}{2}d.$ per hour, was granted without a strike. In 1866 another rise of $\frac{1}{2}d.$ per hour was granted, making the rate $8d.$ per hour.

After a strike and partial lock-out in 1872, the masters granted a further advance of $\frac{1}{2}d.$, making the rate of wages $8\frac{1}{2}d.$ per hour, with a simultaneous reduction in time of four hours per week ; the men leaving work on the first five days of the week at five o'clock, and on Saturdays at twelve. The hour for commencing work was fixed at half-past six on Mondays. In 1873 another rise of $\frac{1}{2}d.$ per hour was granted without a strike, making $9d.$ per hour. The working hours were

fixed at nine and a half per day, or fifty-two and a half hours per week.

In 1876 a memorial was sent to the master builders, asking for an advance of wages from 9*d.* to 10*d.* per hour. This demand being refused, on June 30, 1877, the masons struck, and the strike is still pending.¹ It will be seen from the foregoing statement, which embraces a period of thirty years, that a reduction has been granted since 1847 of seven hours and a half in time—that is to say, from sixty hours per week to fifty-two and a half hours. The current wages in 1847 were at the rate of 5*s.* per day of ten hours, or 30*s.* per week for sixty hours' work. In 1877 the current wages were 1*l.* 19*s.* 4½*d.* for fifty-two and a half hours' work, being an increase of wages amounting to 9*s.* 4½*d.* per week. This represents a rise of 31½ per cent. on the original scale of wages, at the rate of 30*s.* per week, and of 12½ per cent. in time value, or a total advance in thirty years of 44 per cent.

Mr. Howell further states that greater care is taken to insure regularity of employment. The masons and carpenters have better sheds or workshops. Wherever it is possible, the bricklayers engaged in cutting arches, splays, and similar work, are under cover in wet weather. On the other hand, it is said that large contracts are finished more rapidly. Hence the men have to look out for fresh jobs oftener than thirty years ago. The time also is kept more strictly. A workman must be at his work at six o'clock precisely. No five-minutes allowance is now given. The workmen are equally prompt in dropping their tools as the clock strikes five.

Messrs. Lucas have prepared a memorandum giving the various wages by the day or the hour, both for labourers and mechanics. It will be seen upon examination that these figures, although stated in a different

Statement
by Messrs.
Lucas

¹ February 1878.

form, correspond exactly with those contained in Mr. Howell's paper :

Memorandum of the Cost of Materials and Labour, &c. in the Building Trades.

—	Mechanics	Labourers
Sept. 1853. Wages per day of 10 hours = 60 hours per week were	s. d. 5 0	s. d. 3 0
Sept. 4, 1853, to March 22, 1861. Wages per day of 10 hours = 60 hours per week were	5 6	3 4
March 23, 1861, to Sept. 27, 1865. Payment by the day was discontinued, and the men were paid at the rate per hour of	0 7	0 4 $\frac{1}{4}$
Sept. 28, 1865, to May 4, 1866. Ditto	0 7 $\frac{1}{2}$	0 4 $\frac{1}{2}$
May 5, 1866, to July 5, 1872. „	0 8	0 4 $\frac{3}{4}$
July 6, 1872, to Aug. 1, 1873. „	0 8 $\frac{1}{2}$	0 5 $\frac{1}{4}$
Aug. 2, 1873, to present time. „	0 9	0 5 $\frac{3}{4}$

The present Working Hours are :

Monday	9 hours
Tuesday	9 $\frac{1}{2}$ „
Wednesday	9 $\frac{1}{2}$ „
Thursday	9 $\frac{1}{2}$ „
Friday	9 $\frac{1}{2}$ „
Saturday	5 $\frac{1}{2}$ „

Total . 52 $\frac{1}{2}$ hours,

as compared with 60 hours for the summer and 47 hours for the winter season, commencing six weeks before and ending six weeks after Christmas. This shows an increase of 50 per cent. upon the wages of mechanics, and 64 per cent. upon those of labourers. The men now only work 52 $\frac{1}{2}$ instead of 60 hours—a reduction of 12 $\frac{1}{2}$ per cent. in time; the mechanics receive 39s. 4 $\frac{1}{2}$ d. for the 52 $\frac{1}{2}$ hours instead of 30s. for 60 hours; and the labourers work 12 $\frac{1}{2}$ per cent. less time and receive 25s. 2d. for 52 $\frac{1}{2}$ hours as against 18s. for 60 hours.

It is a remarkable circumstance that the most im-

portant advances have been obtained by the unskilled workmen. The lower the original rate of wage the greater has been the advance. This is clearly shown in the following table prepared by Mr. Stephenson :

Advance of wages for unskilled labour

Memorandum with reference to the Comparative Cost of Wages and Materials for Builders' Works in 1865 and 1875.

Wages	In 1865 per hour	In 1875 per hour	Increase
	<i>d.</i>	<i>d.</i>	
Excavators	$4\frac{3}{4}$	$6\frac{1}{4}$	28 per cent.
Bricklayers	$7\frac{1}{2}$	9	20 "
Masons	$7\frac{1}{2}$	9	20 "
„ Fixers	8	$9\frac{1}{2}$	20 "
Carpenters	$7\frac{1}{2}$	9	20 "
Joiners	$7\frac{1}{2}$	9	20 "
Smiths	$7\frac{1}{2}$	9	20 "
Plasterers	$7\frac{1}{2}$	9	20 "
Painters and Glaziers	7	$8\frac{1}{2}$	22 "
Plumbers	$8\frac{1}{2}$	10	$17\frac{1}{2}$ "
General Labourers	$4\frac{1}{4}$	$5\frac{3}{4}$	35 "
Scaffolders	$4\frac{3}{4}$	$6\frac{1}{4}$	28 "
Plumbers' Labourers	$4\frac{3}{4}$	$6\frac{1}{4}$	28 "

It might have been expected that in trades where the Unions were most completely organised the greatest advances would have been secured. It is the least skilled trades, it is the common labour, the supply of which is not limited by any necessity for a preliminary apprenticeship, which have benefited most by the increased demand for labour. The rise in the rate of wages is doubtless due partly to the increased cost of living. The pay of those labourers whose wages were nearest to a mere subsistence level has been most sensibly influenced by the changes which have led to an increase in the cost of articles of the first necessity. The price of labour is determined, not by the completeness of its trade organisation, but by its relative

scarcity. In the instance before us we see that the advance has been most conspicuous in the case of labourers who have no Trades Union organisation. Are we not therefore justified in the conclusion that Trades Unions in the long run exercise a small influence over the rates of wages, in comparison with the inevitable and natural operation of an altered relation between the demand and supply of the necessary commodity of labour ?

Cost of
building

Let us now proceed to ascertain how far the cost of building has been influenced by the increased cost of labour. First, let us consider the cost of materials. Messrs. Lucas observe : 'The cost of materials fluctuates from time to time, but as a whole we find that the average cost is about the same as formerly, the reduction of duty on bricks, timber, glass, &c. being in our favour.'

Mr. Stephenson has kindly prepared a memorandum showing the difference in the prices of materials in London between 1865 and 1875. It will be seen that bricks and Portland stone are cheaper ; while in timber and other articles the augmentation is considerable.

Materials	In 1865	In 1875	Increase
Bricks	34s. per thousand	27s. per thousand	{ 20 per cent. re- duction
Grey Lime	10s. per yard	11s. per yard	10 per cent.
Roman Cement	1s. per bushel	1s. per bushel	—
Portland Cement	1s. 9d. "	2s. 2d. "	26 per cent.
Portland Stone (at Dept- ford)	2s. 1d. per foot cube	2s. per " foot cube	4 per cent. re- duction
Yorkshire 3 inch	63s. per 100 feet	83s. per 100 feet	30 per cent.
Middling Dantzic Fir, } average price . . . }	75s. per load	80s. per load	7 per cent.
Archangel Deals	{ 14l. per stan- dard head	16l. per stan- dard head	16 per cent. mean
Petersburg Deals	12l. 5s. "	14l. 10s. "	Ditto
Lead, Milled Sheet	21s. per cwt.	24s. per cwt.	14 per cent.
Glass, Plate and Sheet	{ Advance about 20 per cent.	—

The increase of wages, according to Messrs. Lucas, ought to have been more than covered by the introduction of machinery for many building operations—for

hoisting all materials, instead of carrying by hod, and raising by hand labour ; for grinding mortar, and for the execution of all kinds of carpenter's, joiner's, and mason's work. They say, however, that their experience shows that the cost of building has actually increased from 20 to 30 per cent., and this increase is entirely due to the small amount of work now done by the men, compared with what they did some few years ago. As an illustration of this they refer to the new station, hotel, locomotive works, and goods sheds at York, which they have recently erected for the North-Eastern Railway Company. These works were of great magnitude, and were superintended by one of the most experienced and able members of their staff. The materials were bought for less than the estimated price, and the introduction of steam-power to an unusual extent—in fact, whenever it could be used—effected an immense saving upon the labour. These advantages were more than neutralised by the indolence of the men. A conspicuous instance is quoted. The labour upon the brickwork, which would formerly have cost 38s. per rod by piece-work, was estimated at a price which Mr. Harrison, the Engineer of the North-Eastern Railway Company, considered liberal for such work, namely 3*l.* 3s. per rod. The actual cost was a little more than 5*l.*, or 1*l.* 17s. per rod more than Messrs. Lucas received from the Company. In this case, therefore, a loss of 55 per cent. was sustained upon the estimate for labour. If, however, the men had done a fair and proper amount of work, the cost would have been as follows :

Observations
of Messrs.
Lucas

With wages at the prices formerly paid, at the rate of 6 <i>d.</i> per hour .	£1 18 0 per rod
Add 50 per cent. for increase of wages at present time . . .	0 19 0
	£2 17 0

The actual cost was a little over 100s. per rod, and this notwithstanding all the additional advantage of the possession of steam-power. The men, it is stated, do little more than half the work for 9*d.* per hour that they formerly did for 6*d.*

Messrs.
Hunt &
Stephenson.
Analysis
of cost of
building

These experiences of a large building firm are corroborated from a different and perhaps a more impartial point of view by Messrs. Hunt & Stephenson. An opportunity of applying an accurate test to determine the depreciation or appreciation in the cost of buildings has recently occurred, Mr. Stephenson having been called upon to make a close professional estimate of the cost of re-erecting an ordinary dwelling house, which had been built in 1865 for the sum of 5,000*l.* The building in question was demolished to make room for a metropolitan railway extension, and it was ascertained that it would cost no less than 5,624*l.* to rebuild it in 1875. Some interesting details, as calculated by Mr. Stephenson, will be found on the next page.

The 'Times'
on wages
in foreign
countries

Having given the results of the experience of large employers in this country, it may be interesting to know that the diminished industry of the operatives under the same conditions has been even more conspicuous abroad. The following paragraph recently appeared in the 'Times' newspaper :

'At the time when prices were most inflated the work and wages of masons in Berlin were submitted to a crucial test. Between 1868 and 1873 the wages of this class of operatives were increased by 50 per cent. In the former year a certain number of masons were accustomed to dress 618 stones of a particular description in a week. In 1873 the same number of men dressed in the same time no more than 304 stones, or less than half ; and as they were paid as much for the smaller

Estimate showing the Amount of each Trade in a Building of an Assured Cost of 5,000L. and the Increase in Cost of both Labour and Materials.

Labour	1865		1875		Average Increase and Decrease in Total Cost in 1875 over 1865	
	Appor- tioned Value of Trade	Relative propor- tion of Labour and Materials	Increase in Cost of Labour	Increase in Cost of Materials		
Excavator	£ 90	£ 10	Per cent. 28	£ 25	Per cent. 10	£ — 19 — 195 — 11 — 45 — 147 — 14 — 59 — 81 — 51 { — — — — — } 15 ————— 643 ————— 19 ————— 624 ————— 5,000 ————— £5,624
Bricklayer	1,200	300	27	81	90	
Mason	800	4-0	24	115	25	
Slater	50	10	27½	3	60	
Carpenter	400	100	24	7	20	
Joiner	800	480	20	24	25	
Smith and Founder	350	70	20	14	60	
Plumber	350	88	25	22	20	
Plasterer	60	240	16	65	75	
Glazier	150	23	22	22	40	
Painter	150	75	22	22	85	
			{ 5	4	50	
		1,956		467		
		2,794		1,956		
				2,423		
				242		
				100		
				142		
				2,794		
				2,936		
				265		
				£5,624		
				Nearly 12½ per cent. advance on 1865		
				250		
				£5,000		
				£5,000		

Fees of Quantity-Surveyor, Local Authorities, and sundry other Fees, &c.

as the greater quantity, it follows that the cost of building a house in Berlin had more than doubled within a period of six years. A similar process has been going on, with more or less rapidity, in most of the cities of Germany and Switzerland. Professor Gustav Kohn, in a pamphlet recently published, compares the cost of building in London and Zurich, and although there is no great difference between the two places in the price of materials, he arrives at the conclusion that it costs twice as much to erect and finish a house in the Swiss city as in the metropolis of Great Britain. To this difference he attributes the fact that rents are so much higher in the latter place than in the former. In order to arrive at a just conclusion, he eliminates from his comparison the business and fashionable quarters, where the question might be complicated by the elements of expensive sites and heavy ground rents, and chooses in the most outward periphery of Zurich a locality which is to that place what Wimbledon is to London. If the result of the Professor's investigations is to be trusted, a dwelling that at Wimbledon is rented at 40% a year could not be obtained at Zurich for less than from 1,500 francs to 2,000 francs a year. And as wages, the cost of materials, the value of money and of land, are pretty much the same in both places, it follows that the difference in rents must arise from the superior skill of English builders and the greater efficiency of English labour. This is the conclusion of Herr Kohn, based as well on induction as on his own personal observation and inquiries.'

Mr. Howell
on improved
skill of
workmen

Mr. Howell contends that the net cost of building has not increased in proportion to the advance of wages. He points to the use of machinery in some branches, to the introduction of better appliances in others, and to

the development of greater skill in special branches. As a rule he considers that the foremen are much superior in ability and character to the majority of those who previously had charge of large undertakings. As an instance of work being done more cheaply, he refers to a statement made to him by a mason of considerable experience and skill, to the effect that each of the blocks of the fluted columns at the British Museum cost, on an average, 5*l.*, whereas now he would be glad to undertake any number of them at 3*l.* 10*s.* each. This reduction in the price of stonework for the British Museum would, however, only be possible under the piecework system. The introduction of piecework, though earnestly desired by masters, is resisted by the Unions. Messrs. Lucas remark that 'By the rules and regulations of the Trades Unions no set-work or piecework is allowed, the great object being to obtain the largest amount of pay for the smallest amount of work and the least number of working hours ; and with every increased rate of wages they go for a decreased number of hours' work in the day, and do a less amount of work in the hour, so that the public are hit all round.'

In concluding their paper, Messrs. Lucas say : ' We believe the reduction of the hours of labour and the half-holiday are a mistake. A man wanting a holiday can always have it, and the old time of sixty hours per week in the summer months is not too much in such a generally healthy business. It appears absurd to lose the summer months, and not make hay whilst the sun shines. In the winter time it might perhaps be better upon outdoor works to commence after breakfast, say at eight o'clock, and leave off at half-past four, with half an hour for dinner, making eight hours per day, or forty-eight hours per week, or an average for the year of fifty-seven hours,

Messrs.
Lucas on
hours of
labour

and 2*l.* 2*s.* 9*d.* per week wages; and we have not the slightest doubt that the men would gladly fall into such an arrangement but for the interference of the Trades Unions. It is clearly to be understood that the foregoing observations apply to architectural buildings only, and not to contracting and engineering works. These are mainly carried out upon the plan adopted by the late Mr. Brassey, that of *set-work*. A certain amount of pay is offered for a given amount of work. Then men are paid for any work done in excess of the minimum amount allowed; and this is the only fair and satisfactory course to be adopted in the building trades in the interests of the men, the masters, and of the public generally.'

Material
and moral
progress.
Mr. Howell's
statistics

Having given in detail the successive advances in wages, and shown the increase in the cost of building, it will be interesting to inquire how far the condition of the operatives has been substantially improved by the rise in the rates of wages. Do we observe any appreciable improvement in their food and in their dwellings? Is their leisure time profitably and innocently employed? Mr. Howell has supplied a complete statement on this subject.

We will take first the article of meat. The rise in the price of meat is concisely shown in the following table :

Date	Average Prices					
	Beef— per stone	Increase	Per cent.	Mutton— per stone	Increase	Per cent.
	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>		<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	
1847—53	4 2½	—	—	4 5	—	—
1853—67	5 0½	0 10	20	5 9	1 4	30
1867—73	5 6	1 4	30	6 4	1 11	43
1874—75	5 8½	1 6	35½	6 5	2 0	45
1876—77	5 11	1 9½	39	6 5	2 5	50

‘In round figures, the price of meat, wholesale in the market, has increased, in the case of beef about 40 per cent., mutton about 50 per cent. Pork has increased proportionately, and bacon at a higher rate still. The price obtained for beasts at the Annual Cattle Shows, from 1847 to 1877, is as follows : From 1847 to 1856 inclusive, the average price ranged from 4s. per stone for seconds to 5s. 7½*d.* for prime cattle. From 1857 to 1866 inclusive, the average price ranged from 4s. 1*d.* for seconds to 6s. 2*d.* for prime qualities. From 1867 to 1877 inclusive, the average price ranged from 5s. 6½*d.* for seconds to 8s. 1½*d.* for prime meat. During the latter period the quality of meat has greatly improved, while on the other hand the poorer classes have had to pay more per pound for inferior meat than the wealthier classes have paid for joints of the best quality. The retail price of meat to working people has been increased not less than 75 per cent., or oftener 80 per cent., and butchers are more careful than formerly not to cut to waste. Hence there are fewer pieces called “block ornaments.” This is equally true as regards slices of bacon. Poultry and fish have advanced in price nearly, if not quite, in the same ratio as meat. Rabbits fetch even a higher price in proportion. As for hares and other game, the poorer classes seldom taste such things. They know nothing of them, except what they see at the poulterers’ shops.’

Take next the items of bread, vegetables, clothing and rent : ‘The price of British wheat has varied from 50s. 6*d.* per quarter in 1848 to 74s. 8*d.* in 1855, which was the highest during the past thirty years. Since 1864 it has varied from 40s. 2*d.* to 64s. 5*d.* in 1867. The average prices quoted for the last five years have been : In 1873, 61s. 8*d.* ; 1874, 44s. 2*d.* ; 1875, 45s. 3*d.* ;

1876, 50s. 3d. ; 1877, 51s. 9d. The ordinary baker's bread in the poorer districts is now 7d. and 7½d. per 4-lb. loaf. It has not been so low as 6d. per loaf for some years. Very inferior bread is nominally cheaper, though actually it is the dearest, in proportion to the solid nourishment it contains. The prices of potatoes and other vegetables, as sold at the greengrocers' shops, have gone up during the past thirty years as much as 100 per cent. Potatoes, which were formerly sold at ½d. per pound, and then at the rate of 3 lb. for 2d., are now 1¼d. per pound, being an increase of over 100 per cent. Cabbages, which could be bought at ½d. each, are now 2d. or 2½d. Turnips, which were formerly sold at about 2d. per bunch, are now from 5d. to 6d. The price of parsnips has advanced from ½d. to 1½d. ; and all other kinds of garden stuff are equally enhanced in price. Coal, butter, and cheese, are most important items, especially the first two. Many thousands of the working classes buy in their coal by the cwt. or in sacks. For some years past the lowest price charged per cwt. has been 1s. 6d., or 30s. per ton. In 1872-73 the price went up to 50s. per ton. The coal consumed by the workpeople is generally very inferior, and the purchasers are robbed in weight and measure. Those who live in apartments have seldom room for more than a sack at a time ; but in newer houses room is provided for half a ton or a ton. The article of butter has ranged from 1s. 6d. per lb. to 1s. 10d. for very inferior qualities, described as little better than mere grease. The consumption of salt butter has diminished of late years, and Brittany butter has been substituted. Cheese, which in days gone by was cheap, is now rather a luxury. It is not used by poor people as it was formerly. The only articles on which there has been a

reduction are sugar and tea ; but most working people concur in saying that tea, as sold at the grocer's, is not so good as formerly. House rent has greatly increased. Apartments of two rooms on a floor have gone up from 4s. 6d. and 5s. 6d. to 8s. 6d. and 9s. per week. The rent of single rooms has risen from 2s. 9d. and 3s. 6d. to 5s. and 5s. 6d. Small houses are very scarce. For a house with four rooms and a washhouse the rents have advanced from 6s. or 6s. 6d. to 10s. or 11s. Peabody's Buildings and the Model Dwellings are full to repletion ; and so great is the demand for accommodation, that enough names are down on the books to fill several more blocks of houses. Boots and shoes are dearer, and the leather is not so good. These articles are of the first importance to working people, who have to work out of doors or walk long distances. Clothing has also gone up in price, although not in the same proportion as other articles. Apparel, however, is usually bought ready made by machinery ; and as machine-sewing is inferior to hand-sewing, clothing is less durable. Cottons and flannels are cheaper, but stuffs and homespuns are dearer at retail prices, and the quality is much depreciated. Almost every little article of domestic consumption has increased in price. Though the increase in cost may only amount to $\frac{1}{2}d.$, the advance is often equivalent to a rise of 40 to 50 per cent. on a small item. It is the universal complaint of the wives of workmen in the present day that they have a difficulty in "keeping house," in consequence of the dearness of everything. One of the greatest evils from which the working classes suffer is that, being obliged to buy in small quantities, they go to small hucksters' shops, or what are called "general shops," where they pay the best price for very inferior articles. The poorer the

neighbourhood, the greater the difficulty in obtaining articles of good quality ; and yet the prices charged are very nearly equal to those charged for the best qualities in the best establishments.'

Failure of
co-operative
stores for
working
classes in
London

The well-managed co-operative stores of the North of England have provided a most effective means of supplying the wants of the working classes. In the metropolis co-operative organisation has been but slowly and imperfectly developed. Perhaps the very number of the population has made the work more difficult. We find less cohesion, less interdependence, and less mutual sympathy in the multitudinous masses of the metropolis, than in the more compact populations of our northern cities, where similarity of employment and a more uniform social status bind the people together, and both dispose and enable them to combine more readily for a common object. Mr. Howell concludes by stating that, with all the drawbacks which he has enumerated, 'the majority of workmen's houses are far superior to those of the same class thirty and even twenty years ago. There is an air of comfort and cleanliness, as a general rule, in the homes of the artisans and mechanics, which shows progress and improvement, and there are fewer wretched homes even in the poorest localities than of old.'

Advance in
standard
of living

I have given *in extenso* Mr. Howell's statement as to the economic condition of the operatives in the metropolis. It affords food for grave reflection. It has been shown in the tables prepared by Messrs. Hunt & Stephenson, Messrs. Lucas, and Mr. Howell, that, during the period embraced in our review, wages have advanced 50 per cent. for mechanics and 64 per cent. for labourers. In the same period, however, the cost of living has increased in such proportions that the wives

of the workmen have experienced an ever-increasing difficulty in making both ends meet. Mr. Howell, indeed, describes a general improvement in the interior of the workmen's houses. That amelioration is probably due to advancing civilisation rather than to the increased spending power of the people. Improved taste and tidier habits, and a more restricted indulgence in intoxicating liquors, would have converted a great number of the miserable hovels of thirty years ago into comfortable dwellings, even though wages had remained at the former rates. The consumption of beer and spirits has increased of late years to a melancholy extent. There is reason to believe that a considerable proportion of the increased wages of the common labourer has been misapplied in self-indulgence. Mr. Howell's remarks as to the improvement observable in the dwellings must be understood to apply almost exclusively to the mechanics, and we may indulge the hope that the majority of the skilled workmen have made a good use of their increased wages.

The recent report of Mr. Plunkett on the Railway Riots in America gives most interesting details on the relation between wages and the cost of living in the United States. In America, every advance in wages has been followed by a corresponding rise of prices, while, owing to the fall in prices which has followed the recent reductions of wages, working men in regular employment have suffered no privation of the necessaries of life. Workmen are perfectly entitled to take advantage of every turn of the market in their favour. It is a delusion to suppose that a general advance in the rates of wages, accompanied, as it must be, by a corresponding advance in prices, is pure gain to themselves.

An exaggerated impression prevails of the power of

Wages in
United
States

London
wages
raised by
extensive
building
operations

the Trades Unions to advance wages by the mere completeness of their organisation, apart from other influences, which are more effective and more natural in their operation. In every controversy with the masters the Trades Unions occupy a prominent position as the spokesmen and advocates of the workmen. They cannot possibly force the employers to carry on their operations at a loss, neither can they compel the public to buy an article or to build a house at a price which they cannot afford to pay. The wages of mechanics in the building trades have been rapidly raised, and are now kept up solely by the constant demand for labour in those trades. The active prosecution of building operations seems somewhat inconsistent with the general depression in almost every other branch of trade. The cause of this apparent anomaly is to be found in the failure of joint-stock undertakings and the revelations of the Foreign Loans Committee. Until a recent period a large proportion of the savings of the country were being absorbed in the conversion of private manufacturing and trading establishments into corporate undertakings, and large sums were lent to weak and almost unknown Governments who had succeeded in alluring the too credulous public by the offer of high rates of interest. Experience has shown that Boards of Directors, with little personal interest in their work, and no technical knowledge, cannot take the place of an individual manager, having a large stake in the result, and qualified by technical training and long experience to conduct a difficult business. The Joint-Stock mania has now happily subsided, and it would be impossible, in the present temper of the public mind, to introduce on the Stock Exchange a loan to a needy foreign State of the second rank. In the absence of other opportu-

nities for investments, the savings of the country are now being applied to building operations. In the suburbs of the metropolis, and in the environs of our provincial towns, long rows of houses are rising up built with borrowed capital. Timid people, afraid of employing their money in more distant operations, are satisfied with the security offered by a mortgage on houses erected in their own neighbourhood. They possess, in the form of a mortgage on buildings, a tangible security, the value of which they perfectly understand. Building has accordingly been carried on with unrelaxed energy, and possibly in excess of the wants of the public. Meanwhile the demand for mechanics and labourers has been sustained at a time when industrial operations generally have been contracted. Thus we see a strike amongst the masons for an advance of wages at a time when the only strikes which are taking place in other trades are strikes against a reduction.

Is the present activity in the building trade likely to continue? This is a question which well merits the attentive consideration of our workmen. Is it not an inevitable consequence of the continued depression of trade that the savings of the country, which have lately been invested so freely in mortgages on new buildings, must be temporarily reduced in amount? If this be so, the demand for labour will slacken and wages must ultimately fall. It is further to be observed that the depression of trade, which has been so serious in this country, has been still more marked abroad. On the Continent large multitudes of skilled men are without employment. If they are introduced into this country the English workman has no more right to complain or to resist than the workmen in France, who quietly suffered my father to take over a body of 5,000 English

Prospects of continued activity in building trade

navvies to make the railway from Paris to Rouen. The bricks in the tunnels under the city of Rouen were laid by London bricklayers.

International
combination
of workmen

It was argued at the recent conferences of the International, that without a combination among the workmen of all nations no general rise of wages is possible. The country in which production is dear will be driven out of the market by the production of other countries in which work is done at a cheaper rate. The same principle applies to the building as to every other trade. Hitherto, owing to the difficulty of communication, the rates of wages have been determined by local circumstances. Railways have tended to diminish these local inequalities, because the supply of labour can now be drawn from an ever-widening area. In the shipbuilding yards on the Thames the great mass of the joiners are Scotchmen, and the difference between the wages on the Thames and on the Clyde is unimportant. It is as easy to introduce masons from Hamburg as to bring joiners from Scotland. There need be no fear of the competition of foreigners with Englishmen if only the latter will be true to themselves. All workmen labour at a disadvantage in a foreign country. Foreigners will never be allowed to gain a permanent footing in this country. The great evil in the organisation of the building trades of London has been the substitution of payment by time for payment by results. Piecework under adequate supervision is equitable alike to the employer, the workman, and the public. There can be no objection to mechanics earning 7s. or 8s. a day, provided they have fairly earned their high wages by a just amount of work. The employer will raise no objection to the payment of a liberal scale, so long as he knows what he will be required to pay, and how much work

will be done day by day. On the other hand, it is utterly wrong that good men and bad men should be paid at a uniform rate of 10*d.* per hour. It is a system which never could have been forced upon the building trades but for the unusual scarcity of labour. The depression in trade to which I have already referred may lead to a contraction in building operations, and it would be well that the opportunity should be embraced for setting the relations between employer and employed in the building trades on that equitable basis on which business in every other branch of trade has been conducted. No industrial organisation can be sound in which, to use the words of Mr. Herbert Spencer, 'duty done and income gained do not go hand in hand'; and the failure will be great in proportion as the dependence of income upon duty is remote.

The conclusions to be drawn from our investigation may be laid down as follows: (I) during the last thirty years an increase has taken place in wages of 44 per cent., and in the cost of building of 20 to 30 per cent.; (II) the advances of wages have been largely absorbed in the enhanced cost of living; (III) the increase in wages has been caused by unprecedented activity in the building trade; (IV) the prospect of a more satisfactory organisation of the building trades depends on the adoption of an equitable system of payment by piece.

Conclusions
to be drawn

I have narrated the story of the rise of wages in the building trades with strict impartiality. Many of those present regard the Trades Unions with a dread I do not share. I can fully understand why it is that the Trades Unions are not viewed with especial favour by the master builders, who have been perpetually thwarted. It is hard to have to yield to the dictation of irresponsible

men, and to be required to pay wages at rates never contemplated at the time when contracts have been entered into. We may sympathise with those who have suffered those losses and vexations ; but if the Unions connected with the building trades have given trouble, it has been the consequence of a great and sustained demand for labour. For years past no skilled mechanic in the metropolis has ever known what it is to be without employment. Our ancient and noble capital has been extended with extraordinary rapidity. The successful in a business or a professional career in the provinces or abroad have crowded into London, and made it year by year more and more the centre of British society in all its various grades, and a place of meeting for persons of every taste and pursuit, whether artistic, scientific, or literary. The man of pleasure and the severe student can here always find congenial company and gratify their special tastes. It may appear that wages have been advanced under the pressure of the Trades Unions, but competition among the masters for labour, of which there was an insufficient supply, has been the primary cause of its enhanced value. If the demand for buildings were to abate in any sensible degree, the price of labour would fall in proportion. The instance quoted at Zurich shows what advances will take place in the price of labour under the same conditions in which the London builders have been placed, and that too in a land of exceptionally cheap labour.

Steady
demand for
skilled
labour in
London

Motives and
actions of
Trades
Union
leaders

Complaints are urged of the indifference of the Trades Unions to the interests of the public. Those organisations have been established to promote the interests of a class, and not for the general good of society ; but my experience of the motives and actions of the leaders of the Trades Unions has led me to believe that, although their energies

are concentrated on the single object of improving the position of their clients, they do not seek to promote those objects by violent measures. I attended the late Congress of the Trades Unions at Leicester. I was the solitary representative of my own order, and I can bear testimony to the admirable manner in which the proceedings were conducted. The programme of subjects for discussion was reasonable and appropriate. The questions it was proposed to ventilate in Parliament were fitting topics for parliamentary debate. There was a creditable freedom from class prejudices. Contrast the proceedings at Leicester with the debates of the International Society on the Continent, or the recent demonstrations in New York, where nonsense was talked of a kind which would never have been listened to in this country. Have any of the Trades Unions of London ever maintained that, 'To protect the useful classes against the avarice of capitalists, or the derangements of trade, the various branches of useful industry should be instituted by the Government upon equitable principles, and thereby furnish employment to those who might be otherwise idle'? Has it ever been resolved at a mass meeting in this city, 'That the time has arrived for all working people to resist by all legal means the oppression of capital, and the robbery which it perpetrates on labour'? We have in the English working people a body of men less likely to be led away by visionary ideas, less ready to listen to vague and envious denunciations, more strongly influenced by a sense of duty, and more law-abiding than the corresponding classes in any other country. With all these merits, they are not exempt from human infirmity. The principle of self-interest is strong with them, as it is with their masters, and it is not always enlightened. They seek to sell their

labour to the highest bidder, just as the masters demand the best price, which the very keen competition amongst themselves allows them to secure.

While I have pointed out the inevitable and disastrous consequences of a too aggressive action on the part of the operatives, I am not an advocate of a too acquiescent temper of mind. The industrial capacity of workmen cannot be developed unless they live in reasonable comfort, in houses in which they take a pride, sustained by adequate sustenance, and encouraged by the prospect of bettering their condition. It is not in countries where the standard of living is lowest, and the pleasures of hope are denied, that production is most rapid and charges economical. 'La pesanteur des changes,' said Montesquieu, 'produit d'abord le travail ; le travail l'accablement ; l'accablement l'esprit de paresse.'

I conclude with one practical suggestion. The labour problem will find its natural solution in an increased supply of labour. It is for this purpose that a handful of foreigners has been lately introduced. Would it not be more easy and more satisfactory to train up the youth of our own country in greater numbers to be skilled handicraftsmen? The reluctance to perform manual labour is a great and growing evil, which has its origin not so much in a dislike to hard work, as in that false social system which gives to the man at the desk a higher rank than it accords to him who stands in a fustian jacket at the mason's bench. While extending popular education, let us guard ourselves against its attendant risks. Let us take care that the educational advantages which we are now giving to the people are not perverted.

Mr. Plunkett quotes from the 'Philadelphia Times' some pertinent observations: 'What a terrible satire upon

our boasted free school system is conveyed in the word "educated." Our children have their poor little brains crammed full of all kinds of impossible knowledge of names and dates and numbers and unintelligible rules, till there is absolutely no room left to hold any of the simple truths which former generations deemed more important than all the learning of the books. The result is that they leave school ignorant of what is most essential, and outside of the schools there is no provision for their learning anything.' It is by a courteous bearing in all the relations of life that the privileged classes can best testify their sense of the real dignity which attaches to honest labour, and show their conviction that the skilful labour of the hands is not inconsistent with culture and refinement.

VIII

THE DEPRESSION OF TRADE

REPRINTED FROM THE 'NINETEENTH CENTURY,' MAY 1879

THE prolonged depression of trade has been the subject of bitter recrimination. The following pages will be written with the desire of promoting more cordial relations between labour and capital.

Decline of
British
exports

That our trade has of late been stagnant and unprosperous is beyond the possibility of dispute. The decline has been more marked in the home than in the foreign trade, and it has been greater in the values than in the quantities of our exports. The most important items in our export trade are the cotton, woollen, iron, and steel manufactures. In cotton there has been an increase in quantity; in woollen yarn an increase in value. In iron and steel the falling away in value is considerable, though the quantity exported has increased. In machinery the growth has been important both in quantity and value.

Diminished
values partly
due to fall
in prices

The diminution in the value of our exports is partly due to the fall in prices. In a recent report to the Board of Trade, Mr. Giffen has given a summary of the changes of prices in the cotton and iron trades between 1861 and 1877. Having minutely and elaborately analysed the variations in the price of the raw materials, and the finished products of the textile and metallurgical

industries, he arrives at the conclusion that the reduction of our export trade since 1873 is a reduction, not of volume, but of price. If the prices of 1873 had been sustained, the falling away in the values of the exports of enumerated articles of British and Irish produce would have been less than a million sterling on a total of one hundred and ninety-one millions and a half. It is difficult to ascertain with accuracy how far the fall in price has been compensated by the fall in the cost of raw material and wages. In any case, as Mr. Giffen remarks, the fact that the trade in 1877 was not greater than in 1873 'amounts to a real retrogression,' allowing for the increase of population in the interval. The average level in prices is lower than in 1861. Employment is scarce, and business unprofitable.

The effects of the general depression of trade extend far beyond the classes directly engaged in productive industry. It is therefore a matter of national importance to ascertain, and, if possible, remove, the causes which have led to the present melancholy condition of affairs. The misfortunes of every country are felt more or less by the other members of the family of nations. We share, by an international participation, in the happy fortunes of a thriving people; and, on the other hand, we cannot look on unmoved when a neighbouring territory is desolated by war, or its resources are shattered by commercial disaster. When, therefore, we seek to discover the causes of the crisis from which we are at present suffering, our inquiry must be extended beyond our own borders.

Causes of
depression
of trade

Trade with India has been prejudicially affected by the depreciation of silver. This revolution is due, as it was recently stated by the Prime Minister, to the determination of France and Germany, the one with

India

sixty millions and the other with eighty millions of silver, to establish a gold currency. The trade with India and China has suffered from another cause—from a pernicious system of long credits, and the reckless competition for business on the part of discounting financial and banking institutions. The recent revelations in connection with the Glasgow Bank have brought to light abuses which have long prevailed and have been widely extended. An almost incredible amount of over-trading must have been carried on, when the representative of a single firm admitted that, within the space of some ten years, his losses had exceeded 2,000,000*l.*

United
States

Let us now direct our attention to another quarter of the globe. Previous to the outbreak of the civil war the people of the United States were by far the most extensive consumers of our manufactured products. The vast expenditure caused by the war led to an increase of taxation, and to the imposition of prohibitory tariffs on foreign importations. The sudden exclusion of foreign goods had the effect of raising prices, by an amount at least equal to the duties imposed. The issue of an inconvertible paper currency, as was pointed out by the late Professor Cairnes, accelerated powerfully the upward movement. The development of manufacturing industry was artificially stimulated by a narrow and unwise course of legislation. Railways were extended beyond the requirements of traffic, and the productive capacity of mills, factories, and iron-works was multiplied tenfold. The dearness of labour gave a renewed impulse to the American genius for the invention of labour-saving machinery, the effect being to aggravate the tendency to over-production, which had been originated by other causes.

It has been calculated by Mr. Wells that, while the increase in population in the United States from 1860 to 1870 was less than twenty-three per cent., the gain in the product of the manufacturing industries during the same period, measured in kind, was fifty-two per cent., or nearly thirty per cent. in excess of the gain in population.

The American manufacturers, with all their skill in the substitution of mechanical for manual labour, cannot produce as cheaply, under a rigid system of protection, as in an open competition with all the world. They may revel in the monopoly of their home market. They cannot compete in neutral markets with a country which has adopted a free-trade policy. When, therefore, the home consumption falls away, a collapse ensues. In the United States the power of production had been increased to such an extent that it would have been impossible for manufacturers to find a market for their goods, even if the former demand had been sustained. And the consumption was reduced owing to the rapid fall in wages, and the diminished incomes of holders of railway and other securities. The import trade was suddenly contracted by the same causes. As the United States had long been the most important consumers of British goods, our exclusion from that market, by the combined operation of the prohibitory tariff and the diminished purchasing power of the American people, was a grave, and it has thus far proved a permanent, disaster.

If we turn to Germany, we find our trade suffering Germany from another foreign commercial crisis. The causes that have brought about the recent financial and commercial misfortunes of Germany have been ably set forth in a pamphlet by M. Wolowski. The sudden

acquisition of an enormous capital, by the payment of the war indemnity exacted from France, produced an effect on the German people compared by M. Wolowski to the sudden appearance of a mirage in a thirsty desert. Every description of industrial enterprise was undertaken with rash precipitation and on a vast scale. The agricultural population gathered into the great cities, causing a portentous rise in rents and in the cost of living. The working classes were dazzled by the sudden rise of wages; they lost their self-control, and became self-indulgent and extravagant. The landed and the middle classes suffered from the general increase in prices and the cost of living, and they too sought for compensation in wild and disastrous speculations. The effects of the commercial mania, which followed upon the military triumphs in France, have not yet disappeared; and although our trade with Germany has been more satisfactory than in other quarters, it cannot be doubted that its volume would have been greatly increased if our customers had been more prosperous, and their purchasing power had not been impaired by the loss of large sums in unwise and unsuccessful adventures. The same spirit of speculation was carried from Germany into Austria. In 1870 and the three ensuing years the financial resources of the country were committed to numerous railway and other undertakings, absorbing all the available capital, involving a heavy load of debt to foreign countries, and anticipating by a generation the legitimate requirements of the empire. We have felt the consequences of the subsequent and inevitable reaction in the diminished purchases of our Austro-Hungarian customers.

Military ex-
penditure

It is not, however, by commercial speculation alone, or chiefly, that the commerce of Continental Europe has

been reduced to its present state of depression. The rivalries of military despots, the devastating wars which they have waged, and the bloated armaments they maintain even in time of peace, have brought a larger share of ruin in their train than all the errors of the commercial classes. In the armies of the five chief European Powers more than two millions of men are permanently under arms, while the annual expenditure on the fleets and armies of the so-called civilised world exceeds 150,000,000*l.*

Let us pass from foreign countries and review the situation in the United Kingdom. Here we have suffered from the waste of capital caused by over-production, and from the recklessness with which advances have been made to bankrupt States. We have been excluded from foreign markets by an impassable barrier of tariffs ; at home we have had an almost unprecedented succession of bad harvests. It was stated by Lord Beaconsfield, in his recent speech in the House of Lords, that the loss on a bad harvest, such as we had in 1875, was no less than 26,000,000*l.* The crops were equally deficient in the two succeeding years, causing a diminution of wealth by 80,000,000*l.* ; and this succession of bad harvests was accompanied for the first time by extremely low prices. The fall in prices in England was caused by the increased production and abnormal depreciation in the price of agricultural produce in America. The superabundant harvest there led to a heavy export movement, and the British farmer is now threatened with a new and formidable competition from the United States. He will be called upon to lead a more laborious life. There must be less supervision and more manual labour. The occupier of land and his family must work as the farmers work in the

Bad harvests
in United
Kingdom

Western States. It is probable that holdings may tend to diminish within limits which can be tilled by a single family, assisted by the best mechanical appliances. Our farmers possess an incontestable advantage in facility of access to the home market, but a reduction of rents may be necessary. Consumers generally have shared in the misfortunes of the agricultural interest. During three years (1875-76-77) of bad harvests we have paid, according to Mr. Caird, 160,000,000*l.* more than in the three preceding years for the purchase of food.

Over-pro-
duction.
Influence on
wages

We need not go beyond the returns contained in the 'Statistical Abstract' for evidence to show that our productive industry has been extended with reckless haste. It was quite unreasonable to expect that the increase in the exportation of British produce from 199,586,000*l.* in 1870 to 256,257,000*l.* in 1872 could be permanently maintained. This excessive production caused a glut in the markets, and rendered labour scarce and therefore dear. The least valuable and efficient workmen could command employment at high wages, and Trades Unions were encouraged to take advantage of the situation, and to impose unreasonable conditions on employers of labour.

Trades
Unions

In their opposition to the system of piecework, and in giving no encouragement to diligence and superior skill on the part of the workman, Trades Unions are wholly in the wrong. The future of British industry depends upon our workmen being allowed to give full scope to their natural energies. If their native vigour be repressed by a baneful influence from without, the star of British commerce must soon decline behind that great continent in the West, peopled by our own descendants, where we see already so many remarkable

evidences of German and Anglo-Saxon energy and enterprise.

The subjugation of the individual to the arbitrary authority of a guild or corporate body is a cherished fallacy of the workmen of all countries. The right of every man to liberty of action, to be sovereign over himself, is absolute and inalienable. In Turgot's famous preamble to the edict of 1776, by which Louis the Sixteenth suppressed the guilds and monopolies established by Colbert, the freedom of labour was asserted in these memorable words: 'When God created man, a being with many wants, and compelled to labour for his livelihood, He gave to every individual the right to labour; and that right is his most sacred possession. We consider that it is the first duty which justice requires us to discharge, to set free our subjects from all restrictions imposed on that indefeasible right of man—restrictions which deprive industry of the incentives derived from emulation, and render talents useless.' The report of the recent French Commission on the condition of the working classes concludes with a similar declaration.

The workmen are not solely responsible for the depression of trade. Neither in the cotton nor in the iron trades can it be alleged that the action of the operatives has been the main cause of the present collapse. The depression in the cotton trade is chiefly due to over-production. The growth in the productive capacity of our cotton mills can be most accurately gauged by a comparison of the number of spindles in existence at successive dates. A table published in the 'Statist' gives the figures quoted on the following page.

British manufacturers have gone far beyond their rivals abroad in the rashness with which factories have

Over-production the main cause of depression in cotton trade

—	1860	1877
United Kingdom	29,000,000	39,500,000
United States	5,235,727	10,000,000
European Continent	13,250,000	19,603,000
India	338,000	1,231,000
Total spindles	47,823,727	70,334,000

Iron trade

been multiplied. The proportionate increase may not be so great in the United Kingdom as in some other countries, in a singularly backward condition as compared with ourselves; but, if we take the actual as distinguished from the proportionate increase, we have added 10,500,000 spindles, while Europe and the United States have added not more than 12,000,000 to the number in operation in 1860. If the condition of the cotton trade is discouraging, the depression in the iron trade is even more serious. As in the case of cotton, so in the iron trade, high prices led to excessive production. Imprudent speculators honeycombed the Black Country with new furnaces, which so completely overtook the demands of the market that in five years no less than 30,000 men have been driven out of the trade. It was by reckless speculation in railways, in 1871-72, that the abnormal demand for railroad iron was created. It was through the recklessness of capital that the dislocation of the cotton trade occurred.

British energy and enterprise have often been foremost to use a favourable conjunction of circumstances for the expansion of trade. The same qualities have not seldom betrayed us into that exaggeration of production which culminates in a crisis—*τινὲς ἀπώλοντο διὰ πλοῦτον, ἕτεροι δὲ δι' ἀνδρείαν*.¹

¹ Aristotle's *Ethics*, book i. chap. 3.

Where is the banker, merchant, or railway contractor who could not from his experience of affairs confirm those wise observations of the late Mr. Bagehot ?

‘Pascal said that most of the evils of life arose from a man’s not being able to sit still in a room. We should have been a far wiser race if we had been readier to sit quiet. In commerce, part of every mania is caused by the impossibility of getting people to confine themselves to the amount of business for which their capital is sufficient. Operations with their own capital will only take four hours in the day, and they wish to be active and to be industrious for the entire eight hours, and so they are ruined. If they could only have sat idle the other four hours, they would have been rich men.’

In this connection it may be interesting to trace the relation in order of time between the rise of prices and the rise of wages. In order of time it will be found that, after a period of depression, prices augment in more rapid ratio than wages ; and that, on the other hand, after a period of inflation, the fall of prices is more rapid than the fall in wages. Prices, like wages, are determined by competition, by the varying relation between the demand and the supply. High profits, however, have much more effect than high wages in raising the cost of production. ‘In raising the price of commodities, the rise of wages operates,’ says Adam Smith, ‘in the same manner as simple interest does in the accumulation of debt ; the rise of profit operates like compound interest. Our merchants and master manufacturers complain much of the bad effects of high wages in raising the prices, and thereby lessening the sale of their goods both at home and abroad ; but they say nothing concerning the bad effects of high profits. They are silent with regard to the pernicious effects of

their own gains : they complain only of those of other people.'

Mr. Lowthian Bell on the iron and coal trades in United States

Mr. Lowthian Bell has traced the fluctuations in the cost of the raw materials and the rates of wages in the iron and coal trades in the United States. His narrative supplies a striking instance of the practical working of the law laid down by Adam Smith. Upon the imposition of prohibitory duties a general rise of prices ensued, and the wages of miners rose very considerably; but the increased amount paid in respect of wages constituted a small proportion of the augmented price which the consumer was required to pay for coals. Fabulous profits were made by the iron manufacturers. The profit on pig iron in a single year was sufficient to cover the cost of the furnace which made it.

Wages and prices. Rise and fall in iron trade in United Kingdom

In the United Kingdom, the rise in the price of iron, in the year 1871 and the following year, both preceded, and was greater in proportion than, the advance in wages. A table giving the prices of iron and puddling from 1863 down to the present time has been published in the 'Statist.' It shows that the manufacture of iron by the processes actually in use yields to the working puddler the value of one ton for every sixteen tons which he produces. The investigation established another deduction which, in justice to the workman, it is important to bring into view. Wages at the present time are at least as low as they were ten years ago. In 1868, when the price of pig iron stood at 6*l.* 5*s.* 5*d.* per ton, the price paid for puddling ranged from eight shillings to six shillings per ton. In 1873 the price advanced to 13*s.* 3*d.*; in 1878, when the price of iron was 6*l.* 0*s.* 5*d.*, the price paid for puddling was reduced to seven shillings. Messrs. Fallows, in their latest circular, state that 'labour has followed in the wake of

prices, and is now lower than for many years past. Ironworkers' wages have been reduced $52\frac{1}{2}$ per cent. since 1873.'

In the coal trade, as Mr. Morley has pointed out, wages went up 1s. $1\frac{1}{2}d.$ per ton, while the price of coal at the pit's mouth had gone up by 15s. $5d.$ per ton. The aggregate increase in the earnings of the colliers was calculated at 15,000,000*l.*; the increase of profits in the corresponding period amounted to 60,000,000*l.* The downward movement in the wages of miners, from the inflation of 1873, has been unprecedented, both in extent and in the rapidity of the change. In a recent article in the 'Times' we read :

Coal trade

Fall of wages

'It is difficult indeed to form even an approximate idea of the extent to which the wages of coal miners have been reduced all round since the trade began a downward course; but the aggregate must be enormous. Mr. A. Hewlett informed the Coal Committee of 1873 that in some of the mines under his charge during April of that year one man was making 24s. $1d.$ per day, another 26s. $10d.$ and so on. Mr. Isaac Booth proved that in the Oldham district the average rate of wages had advanced from 7s. $3d.$ to 12s. $11d.$ per day. Mr. R. Tennant, M.P., quoted figures to show that the average had gone up in West Yorkshire from 3s. $7d.$ to 7s. $1d.$ per ton. In Northumberland, according to Mr. George Baker Forster, there was an advance all round of 66 per cent. Mr. Lindsay Wood spoke to an average rise in Durham from 4s. $8d.$ to 7s. $9d.$; and in other districts the same, or a still larger, rate of advance occurred. But wages are now on an average below the range of 1871—in some cases they are even 20 per cent. lower; and we shall therefore be justified in assuming that, taking one district with another, the miners are

not now earning much more than one-half what they did in 1873. In Scotland, miners' wages now range from 20s. 6d. to 30s. a day. The average rates in Wales are about the same.'

If we allow, with the writer in the 'Times,' an average reduction of only 20s. per week in the wages of each miner employed, we shall arrive at the colossal sum of 25,688,000*l.* as the annual difference between the earnings of the whole body in the year 1873 and in 1878.

Reduction in
numbers em-
ployed

While an unprecedented fall has taken place in wages, the fluctuations in the numbers employed have been equally remarkable. The total number of male persons employed in our coal mines was 370,000 in 1871, 477,000 in 1873, 536,000 in 1875, and 494,000 in 1877. The privations endured by the working population in the mineral districts, from the sudden fall in wages and cessation of employment, should entitle them to the sympathy of the public. The small increase in pauperism reflects honour on the men who have struggled against adversity with noble fortitude, and borne bitter distress and privation without a murmur or complaint. The discoveries of science are frequently attended with ruinous consequences to large masses of workmen. The Bessemer process has led to an almost complete discontinuance of the use of iron rails. Of the 45,000 puddlers formerly employed in the North of England and in Wales, less than half the number are now at work, and the more extended use of steel must lead to a still further diminution of employment in the iron trade.

The rise in
wages rarely
proportionate to
rise in prices

When, after a long depression, trade begins to recover, an upward movement in wages will shortly follow. As soon as the first ray of light begins to penetrate the gloom, the operatives hail the promise of improvement

with thankfulness. They are not curious to ascertain whether their employers might have given a larger advance ; it is sufficient for them that a reaction has commenced. Presently the competition of employers begins to tell on the price of labour, and the inevitable and not undesirable advance of wages begins. The upward movement will probably continue until the rise in wages becomes fully proportionate to the rise in prices. The vigilance of those who guide the conduct of the operatives might often secure a more immediate participation in the improving returns from industry. Their influence is pernicious rather than beneficial, when the operatives are urged to make a stand against a reduction, at a time when the interest of every coal owner and manufacturer would be promoted by an absolute and prolonged cessation of production. It is the wrong moment to fight a battle. It is when trade is profitable, and employers would lose money by suspending operations, that an organised pressure may produce concessions to the working people. In point of fact, a reduction of wages is generally postponed by employers as long as possible. It is the last remedy to which they have recourse.

Regrettable as they are, we must look for a repetition of those oscillations in prices and wages which have been so frequent in recent years. Trade has become international in a larger sense than before. The fluctuations in prices depend on the state of foreign markets and foreign politics, and on the stability of governments not built on the solid foundations on which our liberal and venerable constitution has been reared. Trade is now organised on such a scale as to admit of the influx of vast and uncertain amounts of loose capital, whenever the course of prices turns in favour of any parti-

Inevitable
changes in
reward of
labour



cular branch of industry, and renders it for the time being exceptionally profitable. As prices and profits vary, so there must be a continual higgling in the labour market. When trade is less busy, wages will fall. We see this occur more frequently in England and Belgium than in France. In the latter country many branches of trade are monopolised by a few large firms, who are not easily lured by an ephemeral prosperity in trade to excessive competition and to over-production.

Many alternations of poverty and abundance have been experienced by the working classes of England during the whole course of the present century. The fluctuations in the wages of hand-loom weavers, as shown in the tables published in Porter's 'Progress of the Nation,' may be examined with advantage by the operatives of the present day employed in large concerns, carried on by the application of more or less considerable amounts of individual or associated capital. The wages of the hand-loom weavers of Bolton fell from 24s. per week in 1815, to 9s. in 1817, and 5s. 6d. in 1829.

The change from good times to bad times must be far more keenly felt by the working man, who lives more nearly on a level with his income, than by the capitalist, who is enabled to maintain his habitual standard of living irrespective of the fluctuating results of trade. The constant recurrence of unmerited and unanticipated misfortune reduces the bravest hearts at last to a state of prostration and exhaustion, described by Mr. Matthew Arnold in touching verses, in 'The Scholar Gipsy':

For what wears out the life of mortal man?
'Tis that from change to change his being rolls,
'Tis that repeated shocks, again, again,
Exhaust the energy of strongest souls,
And numb the elastic powers.

Capital tempers the severity of adverse seasons, equalises the condition of the operatives, and shields them from the rude shock of a sudden revulsion in the commercial value of the commodity they are employed in producing. The accumulation of capital has the same beneficent effect in modifying sharp fluctuations in prices. The operations of speculative merchants, who buy when goods are cheap and sell when they are dear, tend to equalise prices. In truth, as Mr. Greg so forcibly puts it, large employers virtually and practically save for the operatives, and bear the fluctuations for them.

Beneficial
influence
of capital

A signal benefit is thus secured to the working class. When prices are falling and the complaints of the manufacturers continually reach our ears, it is sometimes forgotten that the general depreciation of values, while it constitutes a loss to the producer, affords a corresponding relief to the consumer. Mr. Fawcett has given a striking illustration of the loss sustained by consumers from the recent extraordinary prosperity of the coal trade. When similar reductions take place in the price of almost every article in general consumption, the economy in the cost of living goes far to compensate the working classes for reductions in wages. The price of wheat is now lower than at any other time during a long period of years. Even when our harvests have been bad, the overflowing supplies from abroad have prevented a burdensome increase in the price of bread, and the better harvest of last year has still further reduced the prices, already very moderate, of our imported food. Through the fall in the price of coal and iron, railways have been enabled in most instances to maintain their former rates of dividend, and the owners of steam shipping have received a sensible relief. With cheaper raw materials, a losing may be converted into a

profitable trade. By offering goods at lower prices we may increase the demand.

The consequences are sad for the working classes, who, from no fault of their own, are exposed suddenly and unexpectedly to the loss of the larger proportion of their incomes. Many painful reflections must occur to men suffering from these vicissitudes. They were vividly described by Mrs. Gaskell in the melancholy tale of 'Mary Barton':

'At all times it is bewildering to see the employer removing from house to house, each one grander than the last, till he ends in building one more magnificent than all, or withdraws his money from the concern, or sells his mill to buy an estate in the country; while all the time the weaver, who thinks he and his fellows are the real makers of this wealth, is struggling on for bread for his children, through the vicissitudes of lowered wages, short hours, fewer hands employed.'¹

Causes
which pre-
judicially
affect
British in-
dustries.
Retire-
ments from
business

Changes in the management, which deprive large concerns of the benefit of age and experience, are another fertile cause of commercial disaster. In England, more than in any other country, it is a customary practice for senior partners to retire in the prime of life, and to give the management to younger and less experienced men. This constant change, says the 'Statist,' in the *personnel* by which a business is carried on, is of obvious importance, and affords a partial explanation of the recurrence of great failures at intervals of ten or twelve years. The fall of the house of Overend & Gurney was the most striking incident of the crisis of 1866. The loss of its most experienced members was the chief cause of the decline and fall of that famous establishment.

¹ *Mary Barton*, chap. vi.

The diminished purchasing power of the working classes, which must inevitably follow upon a general reduction of wages, has materially contributed to the depression in trade. At frequent intervals we have periodical returns of the movement in our foreign trade, but we have no machinery like that supplied by the Custom House, by which we can gauge the extent and the fluctuations in the consumption of commodities at home. It is on our own people that British manufacturers must chiefly rely, and a small reduction in the earnings of the nation must seriously curtail the aggregate amount available for purchases in the home market.

Diminished
purchasing
power

In considering the falling off in the demand, more particularly for iron and steel, it is to be remembered that many foreign railways, furnished with material from England, were constructed mainly by loans obtained on the London Exchange. So long as money could be raised in London, the republics of South America, and the effete governments of Europe, enjoyed a brilliant outburst of fictitious prosperity. When experience showed how uncertain was the payment of those higher rates of interest, which had allured the credulous public—54 per cent. of the foreign loans issued in London are in default—and when the investigations of the committee of the House of Commons had revealed the chicanery by which the public had been duped in numerous instances, all confidence in investments of this character was destroyed. The loans being withheld, the trade with the countries whom we had hitherto supplied with funds inevitably decayed. No foreign country, as Mr. Wilson remarks, with the exception of France, Belgium, Holland, and Germany, has had in itself resources to buy and pay for the commodities we have sold to them so freely.

Revelations
of Foreign
Loans Com-
mittee

Misrepresentation should be exposed, and the public should be warned against governments persistently in default. The revelations of the Foreign Loans Committee should not discourage those sound investments which, when judiciously made, equally benefit the lender and the borrower. Mr. Mill has truly said that the perpetual outflow of capital into the colonies and foreign countries has been for many years one of the principal causes by which the decline of profits in England has been arrested. It carries off a part of the increase of capital, whence a reduction of profits proceeds. On the other hand, the emigration of English capital has been the chief means of keeping up a supply of cheap food and cheap raw materials for industry to our increasing population.

Foreign
competition

The crisis through which we are passing has been attributed by many to foreign competition. Some have gone so far as to allege that our textile industry has been injured by the invasion of American manufactures into Manchester, and our manufacture of iron and steel by the importation of Belgian goods into the midland counties. The latest Report of the Commissioners of Customs contains a tabular statement, designed to show in what respects and to what extent foreign manufacturers are employed in the production of articles for use in this country. The Commissioners point out that the articles which have been imported in increased quantities, are chiefly food and raw materials. For example, the goods sent to us by Russia, valued at 22,000,000*l.*, or 4,500,000*l.* in excess of our importations in 1876, consisted mainly of corn, flax, linseed, sugar, and tallow. The increased importations from Germany consisted of corn, potatoes, and sugar. A certain increase was observable in the silk and woollen goods

imported through Holland, but neither Belgium, France, nor Portugal showed any appreciable change in the value of the import trade from those countries. The import trade from the United States, amounting to the vast sum of 78,000,000*l.*, is composed almost exclusively of food and raw materials.

The Commissioners of Customs give a tabular statement of the manufactured goods imported into the United Kingdom in the years 1873 and 1877. The most important items are cotton, silk, and woollen goods, glass, iron, and leather manufactures. The results, thousands being omitted, are set forth in the following table :

	1873	1877
Cotton goods . . .	£1,666	£2,144
Silk goods . . .	10,260	12,969
Woollen goods . . .	5,458	7,090
Glass . . .	1,463	1,908
Iron . . .	1,008	1,537

The increase of our imports is considerable, but we can show a still larger increase in our own exportations of the same commodities. As to quality, the gratifying progress we have made in ceramic industry and in the decorative arts, as applied to furniture and upholstery, shows the capabilities of our people in those art manufactures which are a new phase of industry in the United Kingdom. They are an ingathering of the harvest sown from South Kensington. It is a national duty to see that the scientific training of those engaged in metallurgy shall be on a level with the admirable training now provided in the various branches of art industry.

It is not from the cheap labour of Belgium and Germany, as the writers of the manifestoes issued by the associations of employers would have us believe, but

United
States

from the dear yet skilful and energetic labour of the United States that the most formidable competition will hereafter arise. Mr. Gladstone, in his contribution to the 'North American Review,' entitled 'Kin beyond Sea,' has rightly said that the commercial supremacy of the world must ultimately pass from the United Kingdom to the United States. The territory at their command is, in comparison with the narrow area of the United Kingdom, unlimited, and it possesses every natural advantage. The soil is fertile; the mineral wealth is inexhaustible; and the increase in the population has been so rapid that Professor Huxley has predicted that, when the second centenary of the republic is celebrated, the American people will have multiplied from 40,000,000 to 200,000,000.

Future trade
of United
States

That the United States must hereafter command a dominant position is certain, but there is no immediate prospect of a competition which can be injurious to our own manufacturers. While the bulk of the value of American exports is continually increasing, the growth in the export of manufactured goods has been slight. Agricultural products form the great feature of the export trade. In so far as it depends on the effective application of labour, success is certainly not due to the low scale of wages. On the contrary, the high price of labour has been the main incentive to the exercise of the national genius, in the invention of labour-saving machinery. While a wide extent of virgin soil remains untilled, the most profitable and congenial occupation of the American people must be pastoral and agricultural, rather than manufacturing. The natural expansion of the population over the plains of the West was for a time arrested by the high protective duties, which secured excessive profits to manufacturers, and

led to a development of production beyond the requirements of the country. A reaction has naturally followed. Of 716 furnaces in existence in 1877, 446 are out of blast, and the workmen are rapidly leaving the factories and ironworks and resorting to the unsettled lands in the Western States. This movement is prominently noticed in the annual report of the American mercantile agency of Messrs. Dun & Co., quoted by the 'Economist' in the annual review of the trade of 1878. The sales of land by the national government increased from 3,338,000 acres in the year ending June 30, 1877, to 7,562,000 acres in the succeeding year. An equal increase has taken place in the sale of lands by the State land agencies and railroad land offices. It is estimated that no less than 20,000,000 acres have been newly settled in 1878, and that not less than a hundred thousand families, representing a population of half a million, have changed their abodes and their pursuits in the same period.

Commodities in the production of which labour is a principal factor must at the present time be cheaper in England, although our goods may be excluded from the American market by a prohibitory tariff. In process of time, however, the United States will be fully peopled. The expanding numbers will then be driven to remoter districts and compelled to resort to modes of cultivation like those of old countries, less productive in proportion to the labour and expense. The inducements to workmen to abandon manufacturing industries, and to engage in agriculture, will diminish. Labour will, therefore, no longer be withdrawn so readily as at present from manufactures. Wages will fall, and to that extent the power of competition with the British manufacturer will be increased. On the other hand, as agriculture becomes

Effects of
increase of
population

less profitable, the farmers will grow less tolerant of a protective system maintained at their expense for the benefit of a comparatively limited number of wealthy manufacturers, ironmasters, and railway proprietors. Already the pioneers of civilisation in the West are far less prosperous than it is generally imagined. Their position has been described by a well-informed contributor to the 'Economist':

The 'Economist' on pioneers in the West

'The great majority of them are poor. They have abundance of food and fairly good shelter, but they have very little margin for spending, and they want a margin very much. They have taxes to pay, and education to buy, and children to start in life, and lawyers and doctors to fee, and repairs to make, and they want manure, and they wish to save, and they know that as soon as they die their property will be divided; and altogether the plenty of food does not make them feel rich. Great numbers of them are compelled from time to time to raise loans on mortgage which they are hardly ever able to pay off. The prices they get for stock are not large—not approaching English prices—and the prices for cereals are distinctly low. The English market rules these, and to grow corn at such a price that it can be "railed" for 1,000 miles, then shipped to Mark Lane, and then sold for 45s. a quarter, is very difficult indeed. It is true they pay no rent and few rates, but if they farm much land they have to pay high for labour, and if they farm little land the margin becomes very small.'

The following extracts, taken from a recent letter from a correspondent in Boston, present a brighter picture. They present a characteristic specimen of the broad-minded, go-ahead ideas and views of the American man of business :

‘ If men wish to migrate, let them go into Nebraska, or Kansas, or possibly Texas. The population is for the most part active and industrious, constantly striving for something more. The land is fresh and strong, and easily tilled. The crops can be marketed at some price usually, and the railroads are constantly pushing in here and there. The life is rough and hard to the last degree, and calls for health, strength, skill, and patience ; but it is morally healthy. I have been expecting an exodus from England and the Continent, and can only say that the really first-rate lands are going fast. A man with a family of half-grown children to help him, and with a wife who is good and steady in her efforts, should do well in these new lands ; for he can get a living, raise his children well, and see the value of his property increase yearly. He can also lay by a little each year, if he has fair luck. But he had better have a little money to carry him over the first year or so.

Views of a
Boston cor-
respondent

‘ I have always thought money well placed in these new States, in buying lands along the lines of the good railroads, and in the really promising new cities. I have had some there for years, and have seen large sums made in such ventures. But it is necessary to buy land adjoining railroad land, for the railroads always try to sell to real settlers. . . .

‘ I have always thought that the labourers by hand did not have half a chance, and that we, the luckier class, can only help and control them by giving them every opportunity of enjoying comfort and education and happiness, *i.e.* by really civilising them. Heaven knows that we have all we can handle in the way of troubles and fermentation in the nineteenth century, and we cannot stop or recede.

‘ I hope that you are not to have long wars in India

or in Africa, and that peace and prosperity are to rule for a while for you. But the present Government must pass out before you can really move on ; at least, so we think.

‘LEE HIGGINSON.’

Tariff legis-
lation in
United
States

It is not probable that a potato famine will recur, to lend to the arguments for Free Trade the irresistible force they acquired in England in 1843-45 ; but, as the pressure upon the agricultural interest increases, the burden of the present tariff will at last become intolerable. Remission of duties would lead to a more extensive interchange of commerce between the two countries. A vast field would be laid open in which to employ our accumulated capital and manufacturing capabilities, while the New World would supply from its boundless stores the raw materials of industry. It is lamentable that both nations should have been deprived of these reciprocal advantages by selfish legislation. True it is that the two chief members of the Anglo-Saxon family are bound together by bonds more enduring than any which the most prosperous commerce can supply. A common literature, as Professor Hoppin has truly said, is the main source of the most genuine sympathy felt in America for England ; ‘because we read the same English Bible and sing the same sweet English hymns ; because we comprehend the words of William Shakespeare, John Milton, and John Bunyan ; because we laugh and weep over the same pages of Hawthorne, Whittier, Thackeray, and Dickens. This is a spiritual bond more profound than commercial ties and international treaties, and more present and vital than past historic associations.’

A common
literature

The arguments of the ‘Economist’ for a closer com-

mercial union seem feeble beside this eloquent appeal to a nobler order of ideas. Material interests, however, are substantial things, and it should be the aim of the statesmen of both countries to remove every artificial obstacle which prevents the one country from contributing to the utmost to the welfare of the other. The revival of our former interchange of trade with the United States depends on the abandonment of the present policy of rigid protection.

Commercial
union

The tariff question has assumed a new importance from the recent declaration of Prince Bismarck in favour of a protective system. It is not so much the particular scale of duties, which may from time to time be enforced, as the timid and selfish policy of exclusion implied, that constitutes the most discouraging feature of the fiscal policy of the protectionist Governments. A tariff may be imposed for two reasons. It may be imposed, as by the South American Republics, and by our own colonies, for revenue purposes, and levied impartially on the productions of the manufacturers of all countries. Or, again, a tariff may be imposed, as in the United States and France, for the purpose of protecting the home trade against foreign competition. When the object is to give protection rather than to collect revenue, the barrier becomes insurmountable. An appeal will be made to the Government to raise the duty, whenever we succeed in producing an article at such a price that we are enabled to sell it, after payment of duty, at a lower price than that at which it can be produced by the protected industry against which we are competing.

Protection
on the Con-
tinent of
Europe

On the Continent the lamp of free trade is kept burning by a few gifted economists, but it burns with an unsteady flame. Russia, with its vast population is

Openings
for trade in
colonies
and new
countries

enshrouded in a Cimmerian darkness of protection. In Germany, where some progress has been made towards the truth, we are threatened with a retrograde movement. In France we have little reason to look for a renunciation of the protective policy. Excluded from the principal manufacturing countries by a protectionist policy, it is to the colonies, and to the half-civilised countries, that we must look for new openings for the expansion of our trade. The development of our commerce in this direction will afford us this additional satisfaction, that the results arising from our success must be mutually beneficial. We cannot create a trade with Africa or New Guinea without first raising those countries in the scale of nations. We must co-operate with the native populations in the development of their resources, we must help them to accumulate wealth, or they cannot purchase our goods.

Statesmen and merchants, in their efforts to procure new outlets for commerce, may wisely direct their attention to Africa—that vast untravelled continent, with a population of from 350,000,000 to 400,000,000 people, and where 500,000 human beings, according to Mr. Bradshaw's computation, are annually destroyed in the wars that are carried on for the capture of slaves. The first condition to be fulfilled is the establishment of peace and order among these savage races. China, again, has been well described by a Quarterly Reviewer as 'a storehouse of men and means.' Its outer door has scarcely yet been opened.

The colonial
trade

The recent fluctuations in trade afford abundant evidence of the importance of the colonies to the mother country in a commercial, no less than in a political, point of view. While our commerce with the Continent of Europe and with the United States has been con-

tracted, our exportations to our colonies have steadily increased. This valuable source of employment to our population has been developed, partly because national sympathies exert an influence in trade as in higher things, but mainly because no tariff exceptionally unfavourable to the mother country has been imposed. If an import duty is levied, it is levied impartially on the products of all countries. In her commercial relations with her colonies, England may rest assured that she will be treated on the footing of 'the most favoured nation.' The Commissioners of Customs in their last Report direct particular attention to the elasticity exhibited in our colonial trade. Taking for the points of comparison the years 1872 and 1877, we find that the value of the exports to foreign countries diminished from 195,701,350*l.* to 128,969,715*l.*, a difference of 66,731,635*l.*, or 34·1 per cent., and that the value of the exports to the British possessions increased from 60,555,997*l.* to 69,923,350*l.*, or 15·5 per cent. In the year 1877, to which the Report in question more particularly refers, while the value of British exports to foreign countries diminished by 6,811,000*l.*, the export trade to the colonies increased by 5,000,064*l.* These figures afford a convincing testimony of the value of our colonial connection to our trade and commerce; and it is not alone by their demand for the produce of her looms and ironworks that the colonies lend their valuable support to the mother country. Large remittances are sent home to their less fortunate relatives by successful emigrants. Between 1848 and 1876 the emigrants to the colonies and the United States remitted no less than 19,800,000*l.* In this calculation no account is taken of the large numbers of successful colonists who bring back to the mother country the fortunes

they have realised in colonial enterprise and investments.

Emigration.
Its effect on
home population

Hitherto we have been considering emigration as a means of creating an important outlet for external trade. But emigration tends to ameliorate the condition of the population at home, by diminishing the competition for employment—in other words, by increasing wages, or at least by arresting the downward tendency consequent on the growth of the population. It confers an equally essential benefit by the additional supplies it furnishes to a country depending largely on imported food. We have already alluded to the pastoral wealth of the Australian colonies. As their population increases they will doubtless become extensive growers of grain. The prospect of an increased supply of wheat from the colonies becomes especially valuable in view of the diminished growth of cereals at home. The acreage under wheat in the United Kingdom in 1867 was 3,367,876 acres. In 1877 it was reduced to 3,168,540 acres. The acreage under wheat in the Australian colonies and the Cape of Good Hope was 1,056,871 acres in 1867, and 1,513,419 acres in 1875. The average returns of produce per acre in New Zealand in the years 1875 and 1876 were : Wheat, nearly 30 bushels ; oats, 36 bushels ; barley, $32\frac{1}{2}$ bushels ; hay, $1\frac{3}{8}$ tons ; potatoes, $4\frac{7}{8}$ tons. It was believed, until a recent period, that the fertile lands formed a comparatively narrow fringe round the coasts of Australia. Later experiences have shown that the interior of the continent contains vast tracts of land well adapted for settlement.

Mr. Porter
on 'Progress
of the
Nation'

Writing more than a generation ago, when our colonies were in their infancy, and no indications were manifested of the prospective growth on which we may now venture to rely, Mr. Porter opened the chapter on

Colonies in his 'Progress of the Nation' with these glowing words: 'If called upon to declare that circumstance in the condition of England which, more than all other things, makes her the envy of surrounding nations, it would be to her colonial possessions that we must attribute that feeling. In the eyes of foreigners, those possessions are at once the evidence of our power and the surest indicant of its increase.'

British capitalists seeking investment for their resources will best promote their own interests, and, what is far more important, the interests of the country, by judiciously fostering colonial enterprise. The promoters of railways in the United States offer the temptations of high rates of interest, and the capital they borrow in the European exchanges is doubtless employed advantageously to mankind. The British capitalist who lends his money to the farmers in New Zealand or the graziers in Australasia may command a liberal return for his capital, increase the supplies of food at home, and confer a special benefit to his country by helping to create a market for her manufactures.

Colonial
investments

After the interval of a single generation from the publication of Mr. Porter's essay, Mr. Graham, a not less competent observer, gives the same weighty testimony to the economic value of emigration. 'The emigrants,' said Mr. Graham, 'have sent to England wheat, cotton, wool, and gold, to the value of hundreds of millions. What is of still more importance, they grow into new nations; they multiply discoveries; by confederation they will be to the Anglo-Saxon race outposts of strength, across the Atlantic, in the Pacific, in South Africa, and in Australasia, on the flank of India.'

Mr. Graham
on value of
emigration

We cannot hope to concentrate within the narrow

limits of the United Kingdom the productive industry of the world. Other lands must be found for the growth and expansion of the Anglo-Saxon race. The labours of one busy generation in the antipodes have shown what the energy and administrative ability of our race can accomplish. Our teeming multitudes must find their way to the field of promise. They will be following in the wake of an illustrious band of pioneers who have gone before. Australasia, New Zealand, Tasmania, South Africa, and the Canadian Dominion, afford space for the dwellings of millions, and a fruitful soil on which they may bestow their labours.

One or two further questions still demand consideration, in relation to the subjects which we have passed under review. And, first, let us ask ourselves, What should be the final aim of our industrial organisation? Have we made any real progress, morally and socially, if the mass of the population is increasing in numbers only, and not in comfort and civilisation?

An eloquent workman, whose able speech has been translated by Mr. Harrison, reminded the Workmen's Congress at Lyons of a saying by Pierre Lafitte, to the effect that 'to produce furiously that we may consume indefinitely seems the one ideal that men imagine for human life.' To read the letters, addressed by some of their correspondents to the daily journals, it would seem as if they too thought that to secure the most economical production of commodities was the highest aim of a nation. It is certain that the conditions, under which alone competition in trade can be successfully conducted, must be respected. We shall find no sale for our goods in neutral markets, if the same goods can be purchased more cheaply elsewhere. Yet a reduction in wages should be regarded as a

regrettable necessity ; and every step in advance, which the workman can make without injustice to his employers, should be hailed with satisfaction. A land overcrowded with a dense mass of ill-fed, ill-clothed, and poorly housed inhabitants is surely a miserable spectacle. Modern Europe, alas ! contains populations, in whom it might almost seem that the Mosaic prediction had been fulfilled : ‘ In the morning thou shalt say, Would God it were even ! and at even thou shalt say, Would God it were morning ! ’ ¹

If low wages were a means to cheap production—which, however, I do not admit—and if cheapness of production be the ultimate aim of industry, it is towards such a condition that we ought to desire to see ourselves reduced. Numbers are indeed a source of strength, but only when their reasonable physical wants are supplied, and when they have been sufficiently educated to be enabled to ascend from the drudgery of their daily toil to the nobler concerns of life. It is the lot of man to labour, but his labour should not be so incessant or so exacting as to leave no space for thought. As Mr. Bagehot said, ‘ Refinement is only possible when leisure is possible.’ To work hard sixteen hours a day may be good for trade, but not for humanity. I have endeavoured to press the importance of recreation in an address originally delivered to the Co-operative Congress at Halifax, and recently republished. Attention has been invited to this subject in a recent paper by Professor Jevons. The pleasures of music, as he truly says, are shared more widely than any other. They give a delightful sense of repose to an audience tired with the labours of the day, and needing rest for mind and body. The Government and the municipalities should

Hours of
labour.
Importance
of recreation

¹ Deut. xxviii. 67.

make an effort to give to the poor denizens of our vast cities this most innocent source of enjoyment.

Public
recreations

Bands and libraries can be best supplied by the combined efforts of an urban population; but the inhabitants of great towns are never so truly happy as when they can exchange their crowded and monotonous alleys for the freshness, the beauty, and the solitude of the country. Let us be grateful to the zealous defenders of our parks and forests, our commons and open spaces. I remember the fervid denunciations of a working man at a conference of the Labour Representation League, in which the number of acres in Scotland not under cultivation was quoted as a ground of complaint against the Land Laws. The writer had perhaps forgotten that the moors, which he grudged to see surrendered to the sheep, the grouse, the deer, and the tourist, were covered with snow during a prolonged winter. An agriculturist in search of a farm would direct his attention far more profitably to the prairies, or the valleys of New Zealand, than towards the hoary summits of the Grampians.

Footpaths
preservation

The same question was revived on a more recent occasion by the proposal for supplying water to Manchester from Thirlmere. A great city must of course be secured from drought; but the invasion of one of the few districts of the kingdom still preserved inviolate for the lover of nature was a lamentable necessity. Mr. Mill has enforced the arguments urged by Mr. Forster against the dreaded projects of the engineer in an admirable passage:

‘A world from which solitude is extirpated is a very poor ideal. Solitude, in the sense of being often alone, is essential to any depth of meditation or of character; and solitude in the presence of natural beauty and

grandeur is the cradle of thoughts and aspirations, which are not only good for the individual, but which society could ill do without. Nor is there much satisfaction in contemplating the world with nothing left to the spontaneous activity of nature ; with every rood of land brought into cultivation which is capable of growing food for human beings ; every flowery waste or natural pasture ploughed up, all quadrupeds and birds which are not domesticated for man's use exterminated as his rivals for food, every hedgerow or superfluous tree rooted out, and scarcely a place left where a wild shrub or flower could grow without being eradicated as a weed in the name of improved agriculture.'

We are passing through a phase of sore discouragement for British industry and commerce, a time when gaunt hunger and brooding discontent are stalking abroad, a time when the inequalities of fortune embitter the miseries of commercial failure and discredit. Those who have seen their resources dwindling away in a succession of adverse years may perhaps find some comfort in the conviction that many disappointments await the founders of great fortunes. The sumptuous mansion, lately risen from the ground, which has no associations, and cannot be occupied without a change in the habits and customs of a lifetime, is often found a burden rather than a satisfaction to its possessor.

•
 Cur invidendis postibus et novo
 Sublime ritu moliar atrium ?
 Cur valle permutem Sabinâ'
 Divitias operosiores ?¹

Mr. Carlyle has depicted with powerful touches the superior felicity of a life begun and ended in the same

¹ Horace, *Odes*, Book III. Ode I.

station, and amid the scenes which have been familiar from infancy :

‘The wealth of a man is the number of things which he loves and blesses, which he is loved and blessed by. The herdsman in his poor clay shealing, where his very cow and dog are friends to him, and not a cataract but carries memories for him, and not a mountain-top but nods old recognition ; his life, all encircled in blessed mother’s arms, is it poorer than Slick’s, with the ass-loads of yellow metal on his back ?’

A trained and philosophic mind finds deep pleasures in a contemplative existence. To the active, anxious, practical man of business a life of ease can seldom prove a life of happiness. He regrets, when it is too late, the power, authority, and influence he formerly wielded, and which he lost by his retirement from the sphere of his successful labours. The hopes he would fain rest on his successor are dashed aside by repeated examples of riches misapplied. The inheritance of wealth has rarely proved the source of pure and unalloyed happiness. It exposes the feeble to temptation ; it casts on stronger natures a heavy load of responsibility.

IX

*COMPARATIVE EFFICIENCY OF ENGLISH
AND FOREIGN LABOUR*

ADDRESS DELIVERED BEFORE THE EDINBURGH PHILO-
SOPHICAL INSTITUTION, JANUARY 24, 1879

It is proposed in the present address to discuss the character and conduct of the British workman, always so severely criticised in a time of commercial depression. If we look to the amount of our exports, we shall see that we have lost ground chiefly in our trade with great manufacturing countries, from which our goods are excluded by protective tariffs. The growth of our trade to non-manufacturing countries and to neutral markets is not unsatisfactory. The following figures, taken from the Board of Trade tables, give a comparison between 1873, when our exports reached the highest point ever attained, and 1877.

Depres-
sion not
caused by
rise of
wages

Increasing
exports to
non-manu-
facturing
countries

Countries	Exports	
	1873	1877
	£	£
Java and other possessions } in the Indian Seas J	774,673	2,088,775
Algeria	65,565	276,000
The Philippines	439,177	1,314,169
Morocco	365,364	465,258
Venezuela	541,620	633,740
Ecuador	109,383	255,618
Japan	1,884,145	2,460,275
British Possessions	71,147,707	75,752,150

Difficult to
obtain im-
partial
opinions

It is difficult to obtain an impartial opinion on the subject of our investigation from persons practically familiar with the capabilities of the working man. The opinion of a literary man, or an economist, is often more reliable than that of a manufacturer.

Defoe

Mr. Lecky, in his 'History of the Seventeenth Century,' quotes a passage from Defoe's pamphlet entitled 'Giving Alms no Charity,' which gives a vivid picture of the labouring men of England in the beginning of the last century. A bad system of poor relief had already wrought a pernicious influence on the peasantry. 'I affirm,' says Defoe, in the passage quoted by Mr. Lecky, 'of my own knowledge, that when I wanted a man for labouring work, and offered 9s. per week to strolling fellows at my door, they have frequently told me to my face that they could get more a begging. Good husbandry is no English virtue. . . . It neither loves nor is beloved by an Englishman. The English get fortunes, and the Dutch save them; and this observation I have made between Dutchmen and Englishmen, that where an Englishman earns his 20s. a week, and but just lives, as we call it, a Dutchman with the same earnings grows rich, and leaves his children in a very good condition. Where an English labouring man with his 9s. a week lives wretchedly, a Dutchman with the same money will live tolerably.'

Mr. Wat-
son. Re-
marks on
Dutch
workmen

By the kindness of Mr. Watson, who has had extensive experience in the construction of public works in Holland, I am enabled to offer some facts, which will make it possible to judge how the Englishman compares with the Dutchman in our own day, nearly two centuries after Defoe's pamphlet was written.

In summer the Dutch mechanic begins his day's labour at 5 A.M. and ends at 7 P.M., with two and a

half hours' interval. In winter he commences work at 7 A.M. and ends at 5.30 P.M., with pauses of an hour and a half. The workman's food costs from 1s. 3*d.* to 1s. 6*d.* a day. The English labourer, who consumes more meat and beer, would probably spend from 2*s.* to 2*s.* 6*d.* Education amongst Dutch mechanics is more advanced than with us. Carpenters and bricklayers can generally understand and work to a drawing, and write and read fluently. With the view of comparing the cost of work in Holland and in England, Mr. Watson analysed the cost of some sea locks executed in Holland in 1870, 1871, and 1872. The brickwork cost 1*l.* 1*s.* 2*d.* per cubic yard. On a railwayⁿ contract near London, executed in 1878, the price of ordinary brickwork was found to be 1*l.* 4*s.* 4*d.* per yard. The quality of the Dutch work is on the average better than the English. The bricks are excellent, and the workmanship cannot be surpassed. In Holland the wages of a good bricklayer average 3*s.* 10*d.* per day of 10 hours. The Englishman will do about the same amount of work. His wages for 10 hours of labour in or near London, until a recent date, were about 8*s.* a day. Extending the comparison to earthwork, the cubic yard costs by Dutch labour 3·02*d.*; by English labour 3·63*d.* The transport of earth to long distances is of rare occurrence in Holland. In this particular the men are not expert, and the work is quite as costly as in England. Carpenters for rough work are paid in Holland from 4*d.* to 4 $\frac{3}{4}$ *d.* per hour. They are good workmen, though not so active as Englishmen. It may be assumed that the labour of four Englishmen would be equal to that of five Dutchmen. The four Englishmen, at the London price of 6*s.* 6*d.* per day, would cost 1*l.* 6*s.*, as compared with the sum

of 18s. 9d. which would be paid for the five Dutchmen, thus making the English work about 46 per cent. dearer than the Dutch. The quality of the carpenter's work is excellent, but joiners cannot compete in quality or finish with London workmen.

In a report made by the director of a large engineering establishment at Amsterdam to the proprietors, comparing the Thames and the Clyde prices and results with those obtained on his own works, it is assumed that three Englishmen would accomplish as much as four Dutchmen, but the wages of the former averaged 8d. per hour, and the wages of the latter were 5d. As regards quality, though not equal in finish to London work, excellent steam-engines and machinery are now turned out of the Dutch establishment. The cost of labour of all descriptions in Holland has risen at least 30 per cent. during the last 10 years, with a corresponding rise in the cost of living.

It will have been observed that Mr. Watson sets the cost of labour in the rural districts of Holland in comparison with its cost in the vicinity of London during a period of exceptional activity in the building trades. I cannot, therefore, accept his statement as a final judgment. On the comparative cost of labour in mines and iron works Mr. Lowthian Bell is a high authority.

And now let us turn to our most eminent statisticians—men who survey the oscillations of trade from an absolutely neutral standpoint, and who have spent their lives, not in battling with more or less numerous bodies of workmen for small reductions of wages, or in minimising concessions when they are compelled to make them, but in measuring the broad results of international competition.

I take, first, the following passage from Porter's

‘Progress of the Nation.’ ‘The amount of skilled labour performed in a given time by any given number of our countrymen is commonly greater than that accomplished by the like number of any other people in Europe. To this circumstance it is in great part owing that, with a higher rate of daily wages paid for fewer hours of toil than are required in other countries, our manufacturers have been able, under otherwise adverse circumstances, to maintain the superiority over their rivals.’

Porter,
‘Progress
of the
Nation

The work of Mr. Porter has been carried down to the present day by Professor Leone Levi. Confirming the favourable opinion of Mr. Porter, he describes Britain as a perfect beehive of human labour. Taking space and population into account, possibly there is no other country in the world where there is a larger proportion of labourers, where harder work is gone through all the year round, and where the reward of labour is more liberal than in the United Kingdom.

Professor
Leone
Levi

Mr. Mill summed up what he conceived to be the main features in the character of the British workman in the following passage :

Mr. Mill

‘Individuals or nations do not differ so much in the efforts they are able and willing to make under strong immediate incentives, as in their capacity of present exertion for a distant object, and in the thoroughness of their application to work on ordinary occasions. This last quality is the principal industrial excellence of the English people. This efficiency of labour is connected with their whole character ; with their defects as much as with their good qualities.’

A generation has passed away since Mr. Mill placed on record the opinion I have quoted, but I find his views confirmed in the pages of Mr. Wilson, who in his

valuable volume, entitled 'The Resources of Modern Countries Compared,' has given us the latest collection of evidence on this subject. The following passage embodies the final result of Mr. Wilson's elaborate inquiry: 'I have generally come to the conclusion that as yet our supremacy has not been substantially interfered with. The backward wave, which has swept the trade of the whole world downwards, has been due to causes too universal to lead us to suppose that any special decrease in the producing and monopolising capacity of England has occurred. Let the conditions be the same as they are now, when business enterprise again revives, and we shall on the whole be able to retain the position we now hold. We shall be the largest carriers in the world, the largest manufacturers, and the most extensive employers of both labour and money. The resources and advantages of the country in ships, in machinery, in mines, in skilled labour, in teeming population, in unopened stores of coal and iron, and in geographical position, are such as no other country can at present lay claim to, and with these we have nothing to fear. Not only so, but year by year the growth of our own colonies in wealth and certain kinds of producing capacities must tend to strengthen our hands and to make the trade supremacy of England more assured. No other country that the world has ever seen has had so extended an influence, and as yet there are almost no signs of the decay of this vast empire.'

Mr. Wilson

Mr. New-
march

The advantages acquired by Great Britain in international commerce during the last twenty years are shown with admirable force and clearness by Mr. Newmarch, in his recent essay on 'Reciprocity.' He there shows us, to use his own words, 'why it is that, since 1856, the foreign merchandise imported has risen in

amount or value by 117 per cent., while the British merchandise exported has risen in value only 74 per cent., or, put in a more simple form, why it is that in 1877-75 we got 20s. worth of foreign goods for 11s., while in 1859-56 we had to pay 14s. In the twenty years we have acquired such an enlarged power over the foreigner by means of accumulation of capital and improved production, that he now has to send us 14s. worth of his merchandise in all the cases in which twenty years ago he had to send us only 11s. worth.'

Again, when it is attempted to raise an alarm as to the incursions of the manufacturers of the United States into the Manchester markets, let me remind you of some examples of successful competition by British with American manufacturers. I quote the following from an essay by Mr. Wells, entitled, 'How shall the Nation regain Prosperity?' 'In 1874 Chili imported from Great Britain more than 55,000,000 yards, and from the United States only 5,000,000 yards of cotton cloth. This little State, one of the smallest among the nations, with a population of about 2,000,000, imported more cotton cloth, to supply her wants, from Great Britain in 1874, than the United States exported that same year in the aggregate to all foreign countries combined.'

Mr. Wells

In 1874 the export of cotton goods to the Argentine Republic was in excess of 40,000,000 yards, while for the year 1875-76 the export from the United States of the same fabrics was officially reported at 155,000 yards.

Mr. Morley may not be accepted as an impartial witness. His testimony will be accepted on matters of fact. 'They are turning out,' he said in a recent paper, 'a greater quantity of work in Lancashire for each spindle

Mr. Morley

and loom per week than at any previous period in the history of the trade, and more than they are doing in any other country in Europe, however many hours they may work.' He reminds us that it was admitted by the Manchester Chamber of Commerce in 1876, when trade was still profitable to employers, that the price of calico was lower than in any year save one in the history of the cotton trade. Again, as he most fairly argues, 'If it were true that it is the action of the workmen that disables us in foreign competition, then we should expect that the more labour entered into the cost of production, the greater would be our disadvantage in the competition. But in the cotton trade, at all events, exactly the contrary of this is true. The articles in the production of which labour is the most expensive element, are just those in which competition is the least formidable. A common shirting, sold, say, at 7*s.*, and which has cost only 2*s.* in wages, is exposed to competition. But a piece of fine cambric, sold, say, at 9*s.* 3*d.*, has cost 4*s.* 6*d.* in wages, and yet in this description of goods, in which labour is the main element of cost, we have complete command of the markets.'

I might have added largely to the opinions which have been quoted, but I could not have had recourse to more impartial authorities than those which I have laid under contribution. It was my father's conclusion, after a long and wide experience, that in fully peopled countries the cost of railways and other public works was nearly the same all over the world, and that for every country the native labour, when obtainable, was, with rare exceptions, the cheapest and the best. For a task of exceptional difficulty, one requiring all that dogged courage and determination to which Mr. Mill refers, the British miner and navy are unsurpassed. After a long residence

The late
Mr. Brassey

abroad the Englishman adopts the diet and habits of the population around him. He lives as they live, and works as they work.

The fine physical qualities of British workmen are due to a felicitous combination of favourable conditions. They have been reared in an invigorating climate, and by their mixed descent they have inherited the capabilities of many races. The peculiar excellences of the race are well brought out by Shakespeare in the stirring speech addressed by Henry V. to the army which he had mustered at Harfleur.

KING HENRY.—On, on, you noblest English,
Whose blood is fet from fathers of war proof !

. . . . And you, good yeomen,
Whose limbs were made in England, show us here
The mettle of your pasture ; let us swear
That you are worth your breeding ; which I doubt not ;
For there is none of you so mean and base
That hath not noble lustre in your eyes.
I see you stand like greyhounds in the slips,
Straining upon the start. The game's afoot :
Follow your spirit : and upon this charge
Cry, ' God for Harry, England, and Saint George ! '

Henry V.
Act III.
Scene I

In these later days greater victories may be won, and more valuable annexations may be made, by the arts of peace than in the field of battle. The enterprise of our colonists and our merchants is irrepressible. During my recent visit to Cyprus I rode side by side with a man who had been driven only a few weeks before by the Kafirs from his farm on the borders of Natal. When we met, he was earning a living by carrying parcels on horseback between Kyrenia and Larnaca, riding a distance of 40 miles every day under a burning sun. On the following morning I purchased some Australian

British
enterprise
in Cyprus

preserved meat from a merchant at Larnaca, who had just arrived from Vancouver's Island, where trade had been flagging ever since the island ceased to be a free port, and who had come to try his fortune in another outpost of the British Empire. If we turn from the merchant to the manufacturer we recognise less brilliancy, perhaps, and less of that wise caution which distinguishes the Frenchmen, but we perceive an undying energy and admirable skill in administration.

For the workman I contend that, with all his admitted faults, and notwithstanding his incessant clamour for higher wages in prosperous seasons, and his hopeless resistance to reductions in adverse times, he stands before all his rivals in many essential qualities. Beaten we may be at last by the exhaustion of our natural resources. I do not believe that we shall ever be beaten through the inferiority of the ironworkers, the spinners, and the weavers of the United Kingdom.

X

*MOTION FOR COMMISSION ON AGRICULTURAL
DISTRESS*

SPEECH IN SECONDING MR. CHAPLIN'S MOTION, HOUSE
OF COMMONS, FRIDAY, JULY 4, 1879

I RISE with great satisfaction to second the motion which has been brought forward by the honourable member for Lincolnshire in his very able speech. It is earnestly to be desired that the great agricultural interest should be assured that they have friends on both sides of this House, and that the proposal now before the House, and any other reasonable proposal for the benefit of agriculture, will receive full consideration in Parliament. The case for a Royal Commission was very fairly stated in a recent number of the 'Economist' newspaper. 'We are,' said the writer, 'in the midst of the most extended and severe agricultural distress which has prevailed in this country for, perhaps, thirty years, and it becomes necessary to investigate the development of an industry which is the largest and most powerful and diffused of any in the United Kingdom.' The landed interest of this country is now for the first time brought face to face with an extensive and vigorous competition. It is a competition which it is the interest of the consumer to encourage, and one with which the Legislature would be too wise to interfere; but it is also a competition which must have very serious effects on the agri-

Foreign
competition

culture of this country, and which may possibly result in throwing inferior land permanently out of cultivation.

Progress of
British
farming

It cannot be said that English agriculture, under the conditions which have until lately prevailed, has been unsuccessful or unskilful. M. Léonce de Lavergne, in his able work on English agriculture, has done full justice to the ability and enterprise of our farmers. Our land, though on the whole inferior, has yielded more wheat per acre than that of any other country. Taking sheep and cattle together, more animals are raised for the butcher in England than in any part of the Continent. The practical skill of the British farmer has been conspicuous in the management of sheep. The improvements in the breed were commenced in Leicestershire by Mr. Bakewell, and the results in the increased production of mutton were signally illustrated by M. Lavergne. He said that assuming that France and the United Kingdom each possessed an equal number of sheep, which number he took at 35 millions, it being actually $32\frac{1}{2}$ millions, each country would obtain from its flocks an equal quantity of wool; but the weight of mutton, assuming 8,000,000 sheep to be slaughtered annually, would be in France 39,600,000, in England 99,000,000 stone. It is evident that skill and care have not been wanting in the past; but when we turn to the future the prospects are not reassuring. The United States has lately poured into our markets such copious and increasing supplies of wheat and animal food that it has become evident that our old-established systems of cultivation, perfected as they have been by the expenditure of the capital of the landlord and by the skill of the occupying tenantry, must undergo a very serious change.

Necessity
for Royal
Commission

It is most important that the landed interest of this country should be informed, through the inquiries

of the proposed Commission, as to the probable course of trade with the United States in agricultural produce. Information is needed as to the descriptions of produce in which it is hopeless to compete with the great continent of the West. What are the articles in which our soil, and climate, and vicinity to our markets give us the greatest advantage? What steps should be taken to relieve a landowner, whose resources are exhausted, of the responsibility of ownership? Are our arable lands rented too high? What additional securities should be given to tenants? Are the conditions usually found in leases too stringent? On all these subjects we may look for valuable suggestions from the report of the Commission.

And first as to the mode of cultivation. This question of the description of produce to which English agriculture should be especially directed is of the last importance both to owners and occupiers. It is said that the English farmer can afford to pay a rent equal in amount to the freight and railway charges on produce imported from America; but this can only be true when the land he cultivates is equal in point of fertility to the soil cultivated by his American rival rent free, or when the article he is producing is protected from competition by difficulties of transport. The mode of cultivation I believe to be a far more important question for the future than a reduction of rent. The changes which have lately occurred in the formerly prosperous agricultural interest have been traced to the foreign importations. The obvious deduction must be that the British farmer should throw his strength henceforward into the cultivation of those articles of produce which suffer the greatest amount of deterioration from a long sea voyage, and which

Arable
cultivation

involve the heaviest charges for freight. It was shown in the return obtained by the honourable member for East Retford that, while the price of wheat has been kept down by extensive foreign importations, a great advance has occurred in the price of meat. Mr. Caird's analysis of the total value of the home and foreign agricultural produce shows very clearly where the British farmer is best protected by advantages of situation against foreign competition. Of wheat, cheese, and butter, we import a quantity about equal to our home production. Our main supplies of wool are from abroad. Our chief supply of barley, oats, and beans is drawn from home. In a few important articles, however, our home farmers have an undisputed monopoly, and these items include potatoes, of which the annual production is valued at 16,650,000*l.* sterling; milk, 26,000,000*l.* sterling; hay, 16,000,000*l.*; and straw for town consumption, 6,000,000*l.* Already the agricultural interest has come to depend, not on wheat, but on meat, butter, and hay, which still command a good price.

Live stock

Turning from wheat to animal food, we find that the importations from abroad have increased in a still more rapid ratio. According to Mr. Caird, the value of our importations of animal food has risen in the period 1857-76 from 7,000,000*l.* to 36,000,000*l.* It seems probable that the trade will be prosecuted with ever-increasing activity. According to a calculation published by Mr. Clarke in the 'Journal' of the Royal Agricultural Society, the average meat supply of the United Kingdom in 1876 was in the following proportions: Meat from home animals, 79 per cent.; meat from imported live animals, 6 $\frac{1}{4}$ per cent.; imported fresh meat, 2 per cent.; and imported salt meat, 13 per cent.

The importations of fresh meat were doubled in 1877. It is a very important subject for inquiry by the proposed Commission whether that importation is likely to continue and to increase in the same ratio as it has lately done. The answer must depend on the cost of rearing stock in the United States, on the rates of freight, and on the extent of loss by deterioration in transit.

As to the cost of rearing cattle, I have lately been in correspondence with some friends in Boston, from whom I have obtained much interesting information. The business of the herdsmen in the Far West is conducted on a vast scale. Many herdsmen own 75,000 head. They feed their cattle on the eastern slope of the Rocky Mountains. The country is very dry, and could not, therefore, be cultivated. The herdsmen hold the land under the United States Government, and let their cattle roam over a vast extent of country, where they feed all the winter out of doors. They are making every effort to improve the quality of their stock, and meanwhile fill up their herds with large numbers of cattle from Texas. I am informed that the loss of cows is only about 1 per cent. and the loss of steers about $\frac{1}{2}$ per cent. annually. It costs six dollars or 25s. to bring into the world and raise a four-year-old steer. Such an animal is worth at Chicago from 35 to 45 dollars. The cost of transport to Chicago does not exceed eight dollars. At the present prices, the herdsmen realise profits of from 25 to 40 per cent. The facts as to the cost of rearing cattle in the United States at the present time have been stated from a source of information on which I can very confidently rely. It is essential for the guidance of the agricultural interest that a more extended inquiry should be made by the instrumentality of a Royal Commission. In considering

Expense of
rearing cat-
tle in United
States

the expediency of laying down arable land in pasture, it is important to ascertain whether the importation of American cattle is likely to continue and to increase at anything like the present rate of development. It is said that beasts are becoming scarce in Canada. Railways would not long continue to carry cattle at the same price which they have been willing to accept in a time of severe commercial depression. It is a question again whether the United States Government would not levy a charge for pasturage on the public lands when the trade had been developed and was known to be lucrative to the keepers of stock. Even a charge of 1s. an acre would materially affect the cost of breeding and rearing cattle which roamed over such vast territories. The effect of any such charge might be the more seriously felt because the Americans could not put an animal on the market in less than from four to five years. A grass-fed animal could not be fit for sale in a shorter period. It is a question for the Royal Commission to examine whether it would not be wise policy for the British farmer to combine with rather than compete with the American herdsman, and to import, to some extent, the lean stock of America to be fattened on our more luxurious pastures.

Transport
to United
Kingdom

Having referred to the expenses of rearing cattle in the United States, I turn to the cost of transport to this country. On this Mr. Caird remarks: 'Under any circumstances the English producer has the advantage of at least 1*d.* a pound, in the cost and risk of transport, against his transatlantic competitor. It is an advantage equal to 4*l.* on an average ox. Of this natural advantage nothing can deprive him, and with this he may rest content.' It is important, however, to observe that the cost of transporting live animals across

the Atlantic has been very rapidly reduced since the publication of Mr. Caird's book. I am informed by Mr. Beazley, the well-known shipowner of Liverpool, that at first steamers obtained freights of about 6*l.* per head. The rates have gradually been reduced, until now they are only 2*l.* 10*s.* to 3*l.* per head. I have received from Liverpool further particulars showing that the loss of cattle during the voyage is being rapidly diminished by the improved appliances which are being perfected by experience.

The following figures give the importation of cattle into Liverpool from the United States during the past year: In February, out of 4,828 oxen shipped, 468 were lost on the passage; of 1,277 sheep, 120 died. In March the importation was reduced by 2,000 head; 1,829 oxen were shipped, but only nine lost; 1,236 pigs were shipped, and 75 lost; 1,454 sheep were embarked, and 143 lost. In April 1,993 oxen were shipped, and only eight lost; of sheep, the number shipped was 8,818, and the loss 164. The number of pigs shipped was 2,925, and the loss 447. In May there was a great increase in the numbers of cattle landed in Liverpool from the United States, and the loss was comparatively small; there were shipped 6,281 head of cattle, of which 187 were lost; of sheep 13,064 were shipped, and 217 lost; of pigs, 5,834 were shipped, and 418 lost. With regard to the prices realised for the imported cattle, Mr. Beazley has furnished the following authenticated details: 'They find it,' he said, 'better to kill immediately after arrival, as the animals are shipped fat and in good condition, and, as a rule, in the regular traders fitted for the purpose, arrive in fair condition.' Mr. Beazley further informs me that 422 head from Montreal, not in particularly good condition, sold at an

Importation
into Liver-
pool

average of 22*l.* 8*s.* ; 349 head from Montreal, in better condition, sold at an average of 24*l.* 2*s.* ; six superior beasts fetched 31*l.* per head ; 440 beasts sold in London on June 2 at an average of 24*l.* 1*s.* *ex* 'City of London.' That steamer only lost six out of 600.

Such facts as I have quoted have a most important bearing on the prospects of the British farmer. We must extend our survey to foreign countries, and we are entitled to ask the assistance of a Royal Commission in order to complete and perfect our investigation.

Hops

Agriculture is suffering in my own neighbourhood from the serious fall in the value of hops, the fall being due to over-production on unsuitable land. Some fourteen years ago the excise duty on hops was repealed. It was announced at the same time by the right hon. gentleman the member for Greenwich that the Custom-house duty must be repealed. But although hops were thenceforward exposed to unrestricted competition from abroad, the foreign trade necessarily required a certain interval of time for its development. In the meanwhile, through a period of about four years, the growers of hops were in the happy but ephemeral position of emancipation from the excise, while foreign competition was not yet felt. Farmers were making every year a profit on hop cultivation equal to the fee-simple of their lands. Such a state of prosperity could not possibly endure. It attracted a severe foreign competition, and sent down the price of hops. Meanwhile, the high profits had encouraged farmers to extend the cultivation to land not at all adapted for the purpose. The only remedy must be to convert some of those hop lands into orchards. Farmers, however, are hanging on in the hope of a return to the old

prices and the old profits. This can never take place in the teeth of foreign competition, and the sooner the illusion is dispelled by the report of the Commission, the better it will be for the landlords and the occupiers of land. Not only are hop gardens very suitable for conversion into orchards ; they are well adapted for market gardening. A far larger supply of vegetables could be absorbed in the English market ; and the returns upon this description of produce grown in rotation with farm crops would be found very satisfactory.

We want information as to what articles of Cheese produce it is useless to grow in competition with the foreign producer ; but may we not also learn something from their methods of management and cultivation ? As an illustration I will specially refer to the manufacture of cheese. The total quantity of cheese manufactured in the United Kingdom is estimated at 2,000,000 cwt. ; the importations in 1876 amounted to 1,500,000 cwt. The value of the annual home product is estimated by Mr. Clarke, in a recent paper in the Agricultural Society's 'Journal,' at 3*l.* 15*s.* per cwt. or a total of 8,370,000*l.* The finer qualities are produced in only a small proportion of the dairies of England. For cheese of superior quality excellent prices are still obtainable ; but I am informed by an agricultural relative in Cheshire that large quantities of the cheese made last year have not fetched more than 30*s.* or 40*s.* per 120 lbs., while the best qualities fetched from 70*s.* to 80*s.* The same experiences have been obtained in all parts of the country. The question, therefore, that we have to consider, and which I should like to see examined by the Royal Commission, is whether the acreage of farms in the dairy counties has

been judiciously apportioned, and whether the farmers themselves have anything to learn from the processes of manufacture adopted in the United States. The increase in the manufacture of butter and cheese in the Eastern States of America has been most remarkable. Mr. Victor Drummond, in his recent report, gave the value of the cows in the different States at 62,000,000^l. sterling, and the value of the cheese and butter which they produced at an equal amount. The production has increased 33 per cent. within the past year. The exportations of 1878 paid more than a quarter of a million sterling for freight to Europe. The introduction of what is called the factory system has had the effect of materially increasing the production. The Americans work on the co-operative plan. All the farms within a radius of perhaps four miles send their milk to the same dairy, where the production of cheese is carried on, even by small occupiers, on the most extensive scale, and upon the most scientific and economical system. Mr. Drummond gives details as to the processes of making butter and the milking of cows by a mechanical process, which deserve the attentive study of our own farmers; and I look to the report of the Royal Commission to bring its discoveries in a prominent manner under their notice. Some may, perhaps, regard the proposed Commission with suspicion, as a compromise with and an encouragement to the protectionist party. But the Government know too well the almost universal feeling of the country to allow the door to be open to any such misunderstanding.

Protection

The Commission will be careful to exclude even the discussion of the exploded doctrines of protection. Protectionist countries have flourished, not because, but in spite, of protection. But we are not in that

position. A large proportion of our population can only live by successful competition in the neutral markets with the rival industries of foreign nations. We can hold our own only by the cheapness of our productions. More than one-fourth of our total consumption of agricultural produce is supplied by foreign importations ; and if we make the workman pay dearer prices for his food, and admit that wages must be proportionately advanced, we shall raise up an obstacle to the success of our export trade which may prove fatal to its prosperity. We have long since accepted the greatest happiness of the greatest number as the aim of our financial policy, and we should not be shaken in our faith by the temporary misfortunes of any interest, however important, and however solicitous we may be for its welfare and prosperity.

Numerous precedents may be cited for an inquiry, with the view, not to legislation, but to the accumulation of valuable information for the guidance of the industry and commerce of this country. The honourable member for Hackney, in his recent volume on free trade, has enumerated the five Parliamentary inquiries into agricultural distress between 1815 and 1845. Inquiries bearing upon our trade and commerce have not been less numerous. I will limit my references to a very recent example. In 1873, when the consumers were alarmed by the increase in the price of coal, a select committee was appointed, which collected a most valuable body of evidence bearing, not only on the economic, but also on the commercial aspect of the question. The committee concluded their report with an emphatic declaration that the true policy of the country was to maintain an inflexible resolution of non-interference on the part of the State. It is not desired that there should be

Precedents

legislative interference on the part of the State with the supply of agricultural produce ; but it is urged by those who support this motion that when a great interest was in difficulty it might fairly appeal to the Legislature to assist in collecting information for its guidance. As a precedent I may refer to the report presented to the French Government on the state of agriculture in 1868. This *enquête agricole* was conducted by M. Monny de Mornay, and embraced every question connected with the land, such as inheritance, registry, advances of money for improvements, labour, drainage, railway and road communications, and protective duties.

Size of
holdings

Limited
ownership

The question of large and small farms and peasant proprietorship is a subject concerning which it would be very desirable that some information should be collected by the Commission. Any Royal Commission appointed to inquire into the causes of our agricultural distress must consider the effect upon cultivation of the limited ownership of a large part of the soil of this country. We have it on the authority of the noble lord the leader of the Opposition that it is impossible to place a limited owner in as good a position for the effective management of an estate, as an absolute owner. Mr. Pusey's committee reported that it seemed very desirable that estates under settlement should be endowed with every practicable privilege attached to absolute property. The necessity for giving increased facilities to limited owners for raising money for agricultural improvements has been established whenever an inquiry has been instituted into agricultural affairs. According to Mr. Baily Denton's evidence, quoted in the report of the Lords' Committee on the Improvement of Land, out of 20,000,000 acres requiring drainage in

England and Wales only 3,000,000 have as yet been drained. The importance of this question in a public point of view is fully recognised in the report of the committee. It is desirable to convert large areas of our arable lands into permanent pasture, but the process is too tedious and costly for embarrassed landowners. Mr. Caird has recommended that settlements of land should be limited to lives in being, with large powers of sale. I would not advocate any legislation which seems calculated to impair the valuable political and social influence of the hereditary families of this country ; but the position of an owner who cannot do justice to his property is miserable to himself, and a public calamity. Such an owner may derive immense advantage from the conversion of a portion of his landed property into personalty, and the law allows personal property to be tied up in settlement under trustees for as long a period as an entailed estate in land. While the owner requires large powers of sale, the tenant requires greater security of tenure. In the speech in which he moved for a committee of inquiry, in 1845, Mr. Cobden stated that the primary cause of the distressed condition of agriculture was the deficiency of capital in the hands of the farmers. That deficiency he attributed to insecurity of tenure. Mr. Cobden quoted many witnesses, and relied particularly on one whose authority will be acknowledged by honourable gentlemen opposite — I mean Lord Stanley. The following passage is quoted from a speech at Liverpool :

‘I say—and as one connected with the land I feel bound to say it—that a landlord has no right to expect any great and permanent improvement of his land by the tenant unless he shall be secured the repayment of his outlay, not by the personal character and honour of

his landlord, but by a security which no casualties can interfere with—the security granted him by the terms of a lease for years.’

The relations between the agricultural labourers and their employers would form part of the inquiry referred to the Commission. It would probably be found that the cost of labour has not increased in recent years so much as it has been supposed.

As to the
future of
agriculture

In urging the necessity for the appointment of a Royal Commission, it has been my duty to dwell only on the gloomier circumstances that affect British husbandry at the present time ; and, indeed, it seems not improbable that for some years to come the landowner may suffer a loss of income. But English enterprise has never given way before difficulties. That is not the tendency of the national character. We have been successful in raising agriculture to a high pitch of perfection. If we are to depend on the foreign supply of wheat, the cultivation of our soil will require readjustment, and the period of transition may be a severe trial ; but, by the united action of landowners and tenants, and by removing the trammels of an antiquated system of land laws, we shall triumph in the end. There is always in favour of agriculture what M. Léonce de Lavergne has designated the economic reaction. If the agricultural interest could have been destroyed, it would have been destroyed a hundred times. It owes its preservation to the fact that it is necessary—that it is indispensable. The labourer was never in a more favourable position than now, and he has always the resource of emigration. The present difficulties of the tenant farmer will be finally adjusted by competition. Lastly, the landowner may remember that the capital value of land in England is independent in a large degree

of purely agricultural conditions. It is the one exchangeable article which admits of no increase. The accumulation of capital, while diminishing the profits of the merchant, will augment the competition for land. It will compensate for the loss in agricultural by the gain in residential value. The action of these economic laws may easily be impeded. It can only be promoted by the Legislature through the general operation of measures for the advancement of the happiness of the people. I have great pleasure in seconding the motion of my honourable friend.

XI

AGRICULTURAL HOLDINGS

LETTER TO THE 'TIMES,' JULY 19, 1879

IN the present difficult juncture, when every circumstance which affects the prosperity of the agricultural interest is under review, I venture to offer, through the 'Times,' a few remarks on the comparative results of large and small holdings.

On the Continent the land is cultivated in much smaller parcels than is customary in this country. According to M. Lavergne, 50,000 proprietors in France possess each an average of 750 acres, 500,000 have an average of 75 acres, and 5,000,000 an average of $7\frac{1}{2}$ acres. Mr. Kay is of opinion that the average acreage of the small proprietors in France is considerably above the figures quoted by M. Lavergne. In Belgium, where the land is even more minutely subdivided than in France, the average area of separate plots is given by Sir Henry Barron at 1.36 acres.

Size of
holdings.
France

Germany

We have a complete store of information on the tenure of land in North Germany, through the able report prepared by Mr. Harriss-Gastrell, in 1867-70, in compliance with instructions issued by Lord Clarendon. The greater part of the land in what was then the kingdom of Prussia is cultivated by the owners themselves. While the number of tenants wholly engaged

in agriculture was only 30,000, there were no less than 1,000,000 proprietors similarly occupied. Of these more than half belonged to the class of yeomen or team-owning peasants. The area of land owned and cultivated by the so-called 'team-owning' peasant varies from 33 acres in Silesia to 66 acres in Saxony and 81 in the province of Prussia.

It will be interesting to compare the results attained on the Continent with the agriculture of the United Kingdom. In Prussia the productive area yields an inferior return relatively to the productive area of this country. Really high farming is rare. It does not appear to be as profitable as medium farming, and the peasant proprietor will not adopt it. He cannot afford the luxury of *maximum* crops at a less return to himself. In North Germany garden cultivation is renowned for its care and intelligence.

We have seen from the statement of Sir H. Barron Belgium how minute is the cultivation in Belgium. The quantities of fruit, meat, eggs, and potatoes shipped to England are really prodigious. We draw similar produce in large quantities from France. Reichensberger, in his work, 'Die Agrafage,' quoted by Mr. Kay, asserts that the prosperity of France since 1790, notwithstanding the tremendous wars and revolutions through which that country has passed, is entirely due to the laws which have led to a more minute subdivision of the land. The population of France has increased in the interval from 25,000,000 to 34,000,000. A larger population derives far more nourishment from the land of France in the present day than was obtained under the former *régime*. The people pay with less taxes 1,300,000,000f., while the old monarchy fell because it attempted to raise 500,000,000f. annually.

United
Kingdom

In the United Kingdom the average acreage of holdings is 56 acres. Of the tenant farmers, 560,000 in number, 70 per cent. occupy farms under 50 acres each; 12 per cent. between 50 and 100 acres; 18 per cent. farms of more than 100 acres each. These figures are quoted from Mr. Caird. Should we be more independent of the supplies we now draw from the Continent if a greater acreage of our own land were cultivated with the minute care of the smaller tenantry and peasant proprietors of the Continent?

Middleton

Perhaps I may venture to refer to a highly successful operation in the line of agricultural improvements in which I have been personally interested. The estate in question was situate in Middleton, midway between Rochdale and Manchester. In a period of 25 years, at an expenditure of about 8*l.* an acre, the average rent was increased by about 1*l.* per acre, the land finally yielding an average rent of from 45*s.* to 50*s.* When the improvements were begun, the holdings varied from 4 to 15 acres. Twelve miles of fences were removed, and the farms were consolidated into holdings varying from 25 to 80 acres. The tenants were encouraged to devote their attention to dairy farming. At first they took it up with reluctance, but experience soon showed that it paid them better than arable cultivation.

Poultry

Moderate holdings seem peculiarly adapted for occupiers who are prepared to devote attention to the secondary produce of the farm. The rearing of poultry has hitherto been too much neglected in this country. When we look to the fact that eggs are selling in Manchester for 2*d.* each, while foreign eggs are being imported at the rate of 2,000,000 a day, the retail price of which may be computed at 16,000*l.*, it is evident that the English farmers and their families are allowing a

most important source of revenue to be too extensively appropriated by the foreign producer. With good management, the sale of eggs and poultry on a small farm should go very far towards the payment of rent.

Under a system of large holdings, a large produce may be obtained to the acre, by a liberal and scientific application of capital. The smaller holder is more successful in enforcing strict economy in every item of expenditure. The larger farmer realises his profit by the abundant produce which he obtains from the soil. The small farmer makes a profit because he spends little. He feels the rent less seriously than the large farmer. He has a smaller sum to pay for labour, and a larger proportion of the humble fare on which he lives is produced on his own farm.

It is asserted by M. Laveleye that the barren tracts brought into cultivation in Belgium and Holland could not have been reclaimed by large capitalists. The work of reclamation was accomplished by strenuous manual labour, unaided by capital. What is true of Belgium and Holland is equally true of Scotland. The worst lands brought into cultivation have been held by the small cotters.

The subject demands thorough investigation by the Royal Commission about to be appointed. The experience acquired on the Continent, and especially in France, where both high farming and cheap farming have been thoroughly developed, cannot fail to afford useful hints for our guidance on this side of the Channel.

XII

AGRICULTURE IN ENGLAND AND THE UNITED STATES

INAUGURAL ADDRESS AS PRESIDENT OF THE STATISTICAL SOCIETY, DELIVERED ON TUESDAY, NOVEMBER 18, 1879

TURGOT said truly that it is absolutely impossible to follow, through all their successive changes, the multitude of circumstances which cause the fluctuations in prices on the exchange. The most subtle theory, the keenest observation, fail alike to enumerate all the forces in operation, to distinguish their relative importance, to determine their true nature, and the precise limits within which their influence is felt.

At the present juncture, while every other industry in the country is gladdened by the dawn of returning prosperity, a dark cloud still rests on the landed interest. Its difficulties have arisen, partly from a succession of adverse seasons, partly from the increased activity of American competition in European markets. I hope that a summary view of the progress of agriculture in the United States will not be inopportune. Our landlords and farmers want information, and in endeavouring to supply it I offer, perhaps, the most practical evidence of my appreciation of the honour of filling your presidential chair.

I may explain, *in limine*, that my information is derived mainly from documents very kindly supplied by

Mr. Charles Worthington, the able statistician of the Department of Agriculture at Washington. His annual report for 1878 gives the acreage, product, and value of the leading crops for that year. It shows the largest aggregate production in the history of the United States. The total acreage in cereals, potatoes, tobacco, hay, and cotton, was 142,474,000 acres. The fruit crops were estimated at 4 per cent. on the improved land embraced in farms, and amounted to 5,000,000 acres. The pasture lands in farms were supposed to be fully equal to the meadow lands, or nearly 30,000,000 acres. Including the smaller miscellaneous crops, the area under culture amounted to considerably over 200,000,000 acres. The total area of improved lands in 1870, according to the census report, was 188,921,099 acres, which was believed to be much below the aggregate at that date. The subsequent increase of improved lands had been enormous. The area, wide as it is, which has already been brought under cultivation is probably not over one-eighth of the lands in the Union (excluding Alaska) capable of agricultural production.

Agricultural
statistics,
United States

The area in maize has tripled in the last fifteen years. The average product per acre was 26·7 bushels. Some of the highest averages are produced by high culture on the sterile soils of New England, and some of the lowest upon the rich lands of the South and West. The facility with which the virgin lands of the West can be brought under this culture undermines high farming in the East, and causes many farmers, especially in New England, to rely upon Western maize, to which every year an immense area of new land is devoted. The price per bushel has been fluctuating, with a general tendency to decline. In 1878 it was 31·8 cents, say 1s. 4d., against 99·5 cents, or 4s. 1½d., in 1864. The

ACREAGE, PRODUCT, AND VALUE OF THE PRINCIPAL CROPS OF 1878

Crops	Quantity Produced	Acreage	Aggregate Value of Product
			\$
Maize . . . bshls.	1,388,218,750	51,585,000	441,153,405
Wheat . . . "	420,122,400	32,108,560	326,346,424
Rye . . . "	25,842,790	1,622,700	13,592,826
Oats . . . "	413,578,560	13,176,500	101,945,830
Barley . . . "	42,245,630	1,790,400	24,483,315
Buckwheat . . . "	12,246,820	673,100	6,454,120
Total cereals . . . "	2,302,254,950	100,956,260	913,975,920
Potatoes . . . "	124,126,650	1,776,800	73,059,125
Total cereals } and potatoes }	2,426,381,600	102,733,060	987,035,045
Tobacco . . . lbs.	392,546,700	542,850	22,137,428
Hay . . . tons	39,608,296	26,931,300	285,543,752
Cotton . . . bales	5,216,603	12,266,800	193,854,641
Grand total of acres } and value . . . }	—	142,471,010	\$1,488,570,866 or £297,714,177

fall in price indicates rather an appreciation in currency than a depreciation in actual value. It is found that an increase in product causes a decline in price in much greater proportion. The crop of 1878 was valued at 7,800,000% less than the crop of 1877, though it exceeded the latter in quantity by over 45,000,000 bushels. While the export of maize has greatly increased, it still constitutes but a small proportion, or between 6 and 7 per cent., of the production of the United States. It is used as an article of human diet on the farms of the West and South. The proportion so used appears to be declining. As food for domestic animals its place could not be supplied.

The same general remarks may be made of the wheat crops. During the last sixteen years, in which the Department of Agriculture has had a separate existence, it has been noted that the yield per acre has been main-

tained with remarkable uniformity at an average of 12·2 bushels, as compared with $29\frac{1}{2}$ bushels in the United Kingdom, $28\frac{1}{2}$ bushels in Holland, 20 in Belgium, $13\frac{1}{2}$ in France, and $5\frac{1}{2}$ in Russia.

The failure of European crops of late years has created a demand which has caused the American acreage to increase. The wheat acreage of the eight years ending in 1878 averaged about 50 per cent. greater than during the previous eight years. Of the small crop of 1866 the United States exported but 8·3 per cent. ; of the enormous crop of 1878 the export has considerably exceeded 30 per cent. During the eight years ending 1870, the production is estimated at $5\frac{3}{4}$ bushels *per capita* of the population ; during the eight years ending with 1878, it averaged $8\frac{3}{4}$ *per capita*. The average price per bushel has gradually fallen from 8s. 7d. per bushel in 1866 to 3s. 3d. in 1878. Thus the price of wheat in the United States fell from about 65s. per quarter in 1866 to 26s. in 1878, while the price of British wheat was 49s. 11d. at the earlier and 46s. 5d. at the later date.

Fall in price
of wheat

The influence of over-production in reducing the price of corn is very strongly insisted upon in the monthly report of the Department of Agriculture at Washington for January last. In years when an average crop is obtained in Europe the price in the United States is governed entirely by the quantity produced and the home consumption ; the quantity exported being so small in proportion to the enormous amount raised that it exercises no influence on the price. The crop of 1877, amounting to 1,342,000,000 bushels, was valued at 96,128,000l. The crop of 1878, amounting to 1,371,000,000 bushels, was estimated at 87,360,000l. The product slightly increased, while the aggregate value considerably diminished. The lowest prices were realised in Iowa and Nebraska, where

the area under wheat had been most widely extended. The quantity being too great for home consumption, and the distance too remote from the leading markets, the price had fallen to one-half the price quoted in 1876. If this reduction in the price of agricultural produce continues, while the activity of the industrial region in New England is stimulated by a renewed demand for metallurgical and textile products, we may look for some check in the progress of wheat cultivation in the United States. The area of wheat production is annually shifting westward. Wheat is the money crop of the pioneer settlers of the West and North-West ; maize is their home subsistence crop.

Oats and
other cereals

In the United States oats, rye, barley, and buckwheat crops show a tendency to increased acreage, the oat crop of 1878 nearly equalling the wheat crop in the number of bushels. As in the case of wheat and maize, a large crop brings a smaller return than a crop below the average. Rye and barley are what the French call industrial crops, and are raised mostly for the manufacture of alcoholic drinks. Their fluctuations in value sympathise closely with those of special branches of manufacture. On the Pacific coast barley is largely grown as food for domestic animals, the corn crop of that region being small. Buckwheat is grown as a second crop of the season after the winter wheat has been gathered. Its use as a fertiliser is more common than formerly.

Potato crop

The potato crop of 1878 in the United States was 50 million bushels short of an average yield. In the central and southern belts of the Union the sweet potato (*Batatas edulis*) is extensively grown, and furnishes a staple food for all classes of the population. The facilities for estimating this crop being as yet imperfect, it is

not embraced in the annual statistics published at Washington. It is hoped that hereafter the schedules may be enlarged.

Of other farm crops hay is the most prominent. In 1878 it occupied an area exceeding that of the State of Ohio. The aggregate value of the grass crops of the United States, including hay and pasture, probably exceeds largely that of the wheat crop, and is second only to the corn crop, the great leading cereal. Two local crops, tobacco and cotton, exercise a vast influence in the markets of the world. The former, covering less than a thousand square miles, is a prominent crop in only twelve States of the Union. The aggregates for 1878 represent a considerable reduction both of acreage and product. Low prices have discouraged this branch of culture, while conditions of growth have been somewhat unfavourable of late years. Green crops

Cotton growing has fully recovered the aggregates of *ante bellum* production. In 1878 the outturn was over 5,200,000 bales of 450 pounds each. The revolution in the labour system of the cotton-growing region has been completed, its final results being incorporated with the social and productive system of the South in such a way as to restore its industrial efficiency. Meanwhile other agricultural interests have risen to prominence greatly overshadowing the importance of cotton. It brings an aggregate value much less than that of the grain and grass crops. It is destined to increase and to bring hereafter a more solid gain to the cultivators, in proportion as they conform their efforts more fully to the teachings of economic science. Cotton

Turning from cereals and green crops to live stock, at the close of 1878 the farmers of the United States were the owners of 10,938,700 horses, valued at Live stock

114,650,961*l.* ; 1,713,100 mules and asses, valued at 19,206,794*l.* ; 11,826,400 milch cows, valued at 51,390,785*l.* ; 21,408,100 oxen and other cattle, valued at 65,908,665*l.* ; 38,123,800 sheep, valued at 15,804,797*l.* ; 34,766,100 hogs, valued at 22,122,609*l.* ; the total value of these animals being 289,084,612*l.*

Competition
of British
and Ameri-
can farmers

In view of the extraordinary increase in the agricultural production of America, it becomes a grave question for consideration how far the British farmer can hold his own against the vigorous and apparently illimitable competition to which he is now for the first time exposed. Does the agriculturist in the United States enjoy a complete immunity from adverse seasons and from other visitations to which the tillage of the soil is subject in older countries? What are the charges for freight and railway carriage from the fertile States of Western America to the European markets? It is not possible to furnish a complete answer to these inquiries. I can but offer contribution to the common stock of knowledge.

In the United States the vicissitudes of the seasons are felt, though not perhaps so severely as in our own country. The crops, both of 1875 and 1876, with a larger area under wheat than before, were not up to a fair average. The yield per acre was 11 bushels in 1875, and 10·4 bushels in 1876. Wheat, in the United States, is exposed to enemies from which we are happily free. The far-away States beyond the Mississippi are sometimes visited with a plague of innumerable grasshoppers.

The freights and railroad charges on American produce constitute a most essential factor in calculating the probabilities of a more or less severe competition from the United States. It has been already stated that the

principal sources whence our importations of American wheat and cattle are derived are rapidly shifting westwards, while we see a marked decline in the produce of the States contiguous to the Eastern seaboard. In the older States a considerable quantity of land has been thrown out of cultivation, owing to the impossibility of competing with the virgin soil of the far West. In a contribution to the 'Economiste Français' of June 14 last, the aspect of Pennsylvania is described by M. Faupertuis as neglected and almost desolate. The agricultural machinery is deficient and old-fashioned; the farmers are content to live as best they may on the produce of their own land, and many have sunk beneath the load of mortgages, which become more and more burdensome every year. In the State of New York, in the fourteen years from 1860 to 1874, with the exception of certain articles, such as market-garden produce, hay, hops, and potatoes, the growth of which has been stimulated by the development of factories and the increase of the population in the urban centres, every other description of cultivation and all other produce has shown a tendency to diminish, or exhibits an insignificant progress. The five principal cereals, wheat, oats, rye, barley, and maize, furnished 65,215,000 bushels in 1860 and 76,367,000 bushels in 1874. The production of wool fell, in the same interval, from 9,454,000 lbs. to 7,369,000 lbs. The number of live stock—horses, milch cows, sheep, and pigs—was reduced from 5,155,000 to 4,008,000 head, being a diminution of not less than 22 per cent.

According to the special report issued by the United States Department of Agriculture, in January 1879, the price of horses has fallen off, during the last five years, about 30 per cent. in the New England States

and 35 per cent. in the Middle States. In the same region the number of cows has decreased, although the aggregate number in the Union in 1878 was about the same as in the previous year. In all the States prices have declined. The most marked fall is observable in those States where the increase in numbers has been most rapid. The price per head on January 1 of the same year, for oxen over three years old, was 8*l.* 14*s.* 9*d.* in the State of New York, and 5*l.* 18*s.* 2½*d.* in Nebraska. The price of sheep over one year old was 14*s.* 0½*d.* in New York, and 10*s.* 0½*d.* in Nebraska.

The ever-lengthening distances from the most fertile cornlands to the seaports of the United States point to an increase in the cost of transport, even under existing tariffs, and there is every reason to anticipate an advance upon the present low rates on the American railways. Owing to the severe competition between the railways and canals, while the latter are open, the average reduction in the charges for the carriage of corn from Chicago to New York is not less than 50 per cent. below the winter rates. A proportionate reduction takes place in the summer months in the through charges per bushel from Chicago to the English ports. In 1878 the amount fell from 2*s.* 8*d.* in January to 1*s.* 8*d.* to 1*s.* 10½*d.* from July to September. The average charge in 1866, by the Lakes and Erie Canal, from Chicago to New York, was 1*s.* 1½*d.* per bushel. The rates have now fallen to 3½*d.* per bushel by canal and 6*d.* by railway. The average rate for 1878 was 4½*d.* ; for 1877, 5½*d.* ; and for 1872, 1*s.* It is not likely that the shareholders will continue to give their sanction to a rivalry so prejudicial to their interests.

In the introductory observations to the last edition of 'Poor's Railway Manual,' it is remarked that while

the tonnage traffic of the railroads of the United States longest in operation has been fully doubled within the last decade, the increase in the earnings has been inconsiderable. The tonnage carried on the New York Central and Hudson River Railroad advanced from 4,393,955 tons in 1873 to 8,175,535 tons in 1878, while the earnings from freight fell from 3,923,200*l.* to 3,809,166*l.* The tonnage for the five years increased 86 per cent., while the earnings were slightly diminished. The rate for the transportation of freight in 1873 equalled $\frac{3}{4}$ *d.* per ton. It fell, in 1878, to $\frac{1}{2}$ *d.* per ton per mile. The effect of the reduction of freights is shown in the low average dividends on the railways of the United States. On bonds the average amount for the entire railway system is 4.51 per cent., while the dividend on stock is 2.34 per cent., this low average being still further reduced to 1.92 per cent. in the case of the railways of the Western States.

Apprehension has been felt that the value of our flocks and herds will be permanently depressed by American importation. A careful survey of the most recent phases of sheep and cattle farming in America scarcely justifies this conclusion. In seconding Mr. Chaplin's motion for the appointment of a Royal Commission to inquire into the condition of British Agriculture, I entered as fully as the information at my disposal enabled me to do into the subject of the trade in horned cattle. I shall confine myself on the present occasion to the bare statement of the most recent figures. The importation of horned cattle fluctuates from year to year, though with a decided tendency to increase. The value of the animals imported into the United Kingdom was 3,296,460*l.* in 1874; 4,885,462*l.* in 1876; 3,817,499*l.* in 1877; and 5,080,702*l.* in 1878. Sheep increased

Importation
of live stock

from 1,610,355*l.* to 2,185,750*l.* The augmentation in the value of our importations is mainly due to the trade with the United States. The exportation of live stock from that country increased from 733,395*l.* in 1870 to 5,844,653*l.* in 1878, and four-fifths of the trade is with the United Kingdom.

Provisions

While the trade in live animals has been developed with remarkable vigour, the growth in our importations of preserved provisions is more steady and sustained. The value of the imports of bacon and hams advanced from 5,902,429*l.* in 1874 to 8,611,329*l.* in 1876, at which figure it still remains. Beef advanced from 523,326*l.* in 1874 to 1,766,362*l.* in 1878. The exportations from the United States of butter, beef, pork, and ham have increased since 1870 by leaps and bounds.

Sheep

Turning to the sheep husbandry of the United States, it is estimated that the number of sheep in that country has increased from 28,477,951 in 1870 to 31,851,000 in the present year. In 1879 the increase in the number of sheep, over the whole Union, was estimated at 5 per cent. It is chiefly in the newer States that marked progress has been made. In the middle States both the numbers and the value per head were slightly reduced, the depreciation, however, being less considerable than in the case of other kinds of farm animals.

Wool can be grown at a good profit in the main range of the Rocky Mountains, where the yearly cost of keeping sheep has been popularly estimated for several years at 1*s.* 3*d.* per head. The breeds to which attention will be directed in the more populous regions will be those which produce mutton at the cheapest rate, of the best quality, and in the largest quantity. In the middle and eastern States of America, sheep husbandry,

for the purpose of growing wool, is not remunerative. The production of mutton must be combined with the growth of wool, in order to insure a satisfactory return. The success achieved in sheep husbandry in England is due to an early appreciation of the value of sheep for the production of meat.

The fertility of the soil under English farming is attributed by the Department of Agriculture at Washington to the large number of sheep which we maintain. Dairying, and the shipment of its products, withdraw the phosphates from the land. The feeding of sheep tends directly to its enrichment. As sheep have become a more prominent element in British agriculture, so the yield of wheat has increased to the present high average. The land of the United States, it is asserted, will never become more fruitful than at present, without the aid of meat production as a permanent element of farm economy. Worn-out hay farms in the State of New York have been restored to a high degree of fertility by the steady introduction of sheep.

In France, where the predominance of merinoes has retarded the increase of their flocks, the process of 'muttonising the merino breeds' is in progress, and meat is now the first consideration with the French as with the English breeders. In the older States of America the same transition is taking place.

The English farmer has suffered some anxiety of late, owing to the large importations of sheep, bacon, and ham from the United States. It would seem, however, from the most recent official reports, that the prices of these articles have touched a point at which it is impossible that they can be maintained. In point of fact, the price of bacon advanced in the English market not less than 20 per cent. in September last. The prices for hogs in

Prices

January 1879 were described as ruinously low. The records of the Agricultural Department had never shown so low a price. The increase of 5 per cent. in the number of animals was mainly caused by large additions to the stock in the States lying west of the Mississippi River. The average prices per head for hogs over one year old are given at 1*l.* in Illinois, and 1*l.* 18*s.* 6*d.* in New York. The swine in the United States have suffered seriously from a disease known as the hog cholera.

Labour

In considering the prospects of British agriculture in competition with the United States and Europe, the cost of labour is an important element. If the cost of performing the various operations of agriculture varied as the rate of wages, it is evident that British farmers would have little reason for misgiving at the prospects of American competition. According to Mr. Caird, the dividing line between high and low agricultural wages in the United Kingdom follows the line of coal. In the northern counties the average weekly wages were 11*s.* 6*d.* in 1853, and 18*s.* in 1873. In the southern counties the rate had risen in the same interval from 8*s.* 5*d.* to 12*s.* Turning to the United States, the average farm wages in 1879, in Maine, Massachusetts, Kentucky, Ohio, and Illinois, were about 6*s.* a day, without board, in the harvest months, and about 4*s.* a day during the rest of the year, not in the harvest months. In Kansas the rate was about 1*s.* per day, in California it was 3*s.* a day, higher in the harvest months, and 2*s.* a day more than the rates already quoted during the other seasons of the year. Throughout the Northern States, wages may be taken at 4*s.* a day for unskilled, and double that amount for skilled labour. The cost of provisions is lower in the United States than in Great Britain. Rents, clothing, and every description of manufactured goods are dearer.

It should be the aim of British statesmen to direct the attention of the agricultural community to the expediency of raising the utmost diversity of products. The Department of Agriculture in the United States assists the farmers by the publication of monthly reports on the conditions and prospects of the crops, both in Europe and America. It conducts experiments in the growth of fruits, vegetables, and farm crops, and publishes a series of useful manuals for the guidance of those who may desire to undertake some new cultivation. When the corn, the rice, and the cotton areas in the South became less remunerative than formerly, the Department pointed out that diversity of crops was the principal requirement of American agriculture. Attention was specially directed to the advantageous results that might be anticipated from the cultivation of sugar. In other official publications, the Department has urged that Congress should form a reeling establishment, for the purpose of training those who may be disposed to embark in silk culture. A useful manual on the cultivation of the fig has recently been published.

Science

Unaided by advice and suggestion from the Government, our own agriculturists have recognised the necessity for a change in the cultivation of the land in the United Kingdom. The agricultural returns for the last three years show a decrease of 9 per cent. in the extent of land under wheat, a decrease of $3\frac{1}{2}$ per cent. in the area under oats, under barley an increase of 10·3 per cent., under potatoes an increase of $5\frac{1}{2}$ per cent. The returns of 1879, when compared with those for the preceding year, show a decrease in the area under cultivation of 11 per cent. in the case of wheat and 3 per cent. in that of oats. Under barley the increase amounts to 8 per cent. Mr. Caird, carrying the com-

Increased
area under
grass

putation further back, informs us that in Great Britain, in the last ten years, the total extent of arable land remains unchanged, while the area of permanent pasture has increased by a million acres, or 8 per cent. England is becoming a dairy farm, a grazing country, and a market garden, looking to distant lands for corn and other commodities, which bear long transport from places where they can be more cheaply produced. Mr. Caird highly approves the policy our agriculturists have adopted. Our climate is the most favourable in Europe for the production of milk, meat, vegetables, and grass. Farm labour is growing dearer. In proportion to their value, the products just enumerated are the least costly in labour. Mr. Caird predicts that the poor clay soils will gradually be laid to grass, and that much of that vast tract in the United Kingdom which has been left to nature will be reclaimed for the rearing of sheep and cattle.

Fruit and
vegetables

Mr. Whitehead, of Barming, near Maidstone, a high authority on fruit and vegetables, has lately published two valuable pamphlets, from the pages of which the following information has been borrowed. The pamphlets should be read by all who are interested in the useful subjects of which they treat.

Increased
cultivation
of the potato
recom-
mended

The acreage under potatoes in Great Britain, during the eight years ending 1877, was 544,345 acres, or, within a fraction, the same as in 1879. The total cost of cultivating an acre of potatoes is estimated at from 17*l.* to 25*l.*, and the yield at from 5½ to 10 tons. The average price for the last ten years in London was 5*l.* 10*s.* per ton ; and the growers have generally realised a handsome profit.

The acreage of fruit land in 1877, including orchards with grass under the fruit trees, and cultivated fruit

land, was 163,290 acres. It increased in England alone from 153,277 acres in 1877 to 159,095 in 1878. A proportionately large addition had been made in the four preceding years, and chiefly in the neighbourhood of London. The cost of planting with apple and pear trees varies from 9% to 14% ; the cost of maintenance is from 2% to 5% ; while the average return may be set down at 10% per acre. In ordinary seasons the cultivation of fruit is fairly profitable. In favourable seasons, when not less than 50% per acre is sometimes realised, it is highly remunerative. The extension of fruit plantation has been checked in consequence of the heavy outlay at the commencement, and the absence of any definite right with regard to compensation to tenants. Under the Agricultural Holdings Act the planting of orchards is scheduled as a first-class improvement, for which the tenant may claim compensation within a period of forty years. If this payment were in all cases obligatory, Mr. Whitehead is of opinion that large additions would be made to the acreage of fruit land in England, and that great improvements in the cultivation and management of the existing acreage would result.

The agricultural returns of Great Britain for 1879 exhibit a considerable extension of the area employed for market gardening. The extent was 40,582 acres, as compared with 37,273 acres in the preceding year. The cultivation of vegetables is conducted with considerable profit. Cabbages frequently realise from 60% to 70% per acre. Not less than 180% per acre has been made from onions, while 35% is an average return, the usual crop being about fourteen tons per acre. The average return from cucumbers is 45% per acre. The rents of market-garden land within twenty miles from London

range from 4% to 9%. Labour expenses amount to from 6% to 9% per acre. Market gardening might be extended with advantage in many districts. In seasons when cereals fail vegetables will ripen, fruits will become fit for culinary operations.

In a paper lately read before the British Association, Mr. Shaw-Lefevre has shown that the agricultural development of America will not necessarily affect prejudicially the economic condition of this country. This reassuring view is confirmed by the additional statistics collected in the present paper.

Prospects of
agriculture
in England
and the
United
States

Well-informed American newspapers, such as the 'Iron Age' and 'Daily Bulletin,' have lately expressed an opinion that the United States may be on the verge of an excess of agricultural production. The railway companies may raise their tariffs. Such a step must either lead to a rise in prices, or reduce most materially the profits, and so discourage the development of agriculture in the Far West. In the meantime, the return of more favourable seasons and the reform of the land laws may ameliorate the condition of the farmer in England, while the condition of the agriculturists of the United States may have ceased to be as flourishing and prosperous as it is at the present time. As the husbandmen of that country advance towards the western seaboard of the continent, leaving behind them vast tracts of land exhausted by a few consecutive years of cultivation, the cost of transport to this country must steadily tend to increase. To restore the fertility of the New England States by the use of manures is a practicable operation; but the cost of cultivation under these conditions would probably be greater than in the United Kingdom.

These remarks apply primarily to the case of wheat.

They apply with still greater force to the importation of live stock. Cattle and sheep have diminished in numbers in the more accessible Middle and Eastern States ; they have increased in the pastoral regions west of the Mississippi. It is incredible that animals can be transported by rail from the pastures of the Rocky Mountains, across the wide continent of America, and then transhipped to Liverpool, at prices sufficiently low to deprive the British agriculturist of his legitimate profit. In process of time payment will be exacted for the use of the pasture, even in the remote grazing districts of the West. Hitherto it has been left free to all comers. In view of these considerations, it would not appear to be necessary to accept a permanent and indiscriminate reduction of rentals in England. Landlords may properly be asked to assist their tenantry to tide over a temporary difficulty by a reduction of rents. Such concessions should neither be demanded nor conceded for a lengthened period. In the state of uncertainty in which both landlords and tenants are at this moment placed, long leases would seem to be equally undesirable on both sides. The tenant should be effectually protected against capricious eviction. He should be entitled to ample compensation for improvements.

The horoscope of the future has been cast with philosophical acuteness in the papers from the pen of M. Leroy-Beaulieu which have lately appeared in the 'Economiste Français.' He admits that some districts of Europe may suffer permanent loss from the competition of the New World, with its boundless extent of land, and its fortunate immunity from the burden of rent. He looks upon reduction of rent as necessary only under certain exceptional circumstances and in certain localities. If rents are permanently reduced, it will be

M. Leroy-
Beaulieu

due to a corresponding fall in prices. If the tendency is general towards lower profits, the loss of income may be fully compensated by the increased purchasing power of money—by the cheapness, in other words, of the necessaries of life.

Steam and electricity are great levellers ; and the abundance of capital, the general diffusion of education the closer rivalry in every field of human endeavour, combine to equalise the circumstances of individuals. Such changes are not misfortunes. Those young communities beyond the sea which are advancing with such rapid strides—the two Americas and Australia—will not allow the Old World to slumber. If we feel the effects of their keen competition in our markets, they insure us against famine, and furnish our dense and increasing population with welcome and abundant supplies.

XIII

*BOARD OF ARBITRATION AWARD,
STAFFORDSHIRE POTTERIES*

NOVEMBER 20, 1880

IN proceeding to make an award affecting the material well-being of more than fifty thousand workpeople, and the profits of an industry in which millions of capital are embarked, I am deeply impressed with the responsibility of my task.

Before entering upon an examination of the case which has been submitted to me, it may be desirable that I should state that my decision will be guided by the rule laid down by Mr. Bloor, in his speech on behalf of the operatives, at the last arbitration. It was, he said, a violation of the spirit, and destructive of the principles, of arbitration, to ask another umpire to reverse the decision of his predecessor, in an appeal based on the selfsame grounds.

In considering the general question of wages in the Potteries, the historical review may be compressed within a limited period. During a space of forty years, no advance had taken place in the prices paid for piece-work, until the general growth of trade in the year 1872 led to an increase in the rate of wages, estimated by the workmen at from three to seven per cent., and by the employers at ten per cent. The advance of 1872 was

Former
Awards

freely given, without recourse to arbitration, and the settlement remained undisturbed until 1876, when the employers asked for a return to the former scale of prices. The case was referred to arbitration, and was decided in favour of the workmen. In 1879 the demand was once more renewed on behalf of the employers, and a reduction of eight and a quarter per cent. was awarded by Lord Hatherton.

Present
claim of
workmen

On the present occasion the workpeople have applied to the Board of Arbitration for a return of the reduction made under the award of Lord Hatherton. The case was opened, on behalf of the workmen, in a concise and able statement by Mr. Bloor. The increase in the exportation of earthenware was the point on which he chiefly insisted. In the first ten months of the present year the total value had risen by no less than 185,000*l.* as compared with the corresponding period of last year. If the trade increased in the same ratio to the end of the year, it would reach a total of not less than two millions sterling, an amount which had only been exceeded twice in the previous fourteen years. To the United States we have exported in ten months earthenware goods to the value of 772,844*l.*, as compared with a total of 543,000*l.* for the year in 1876. The growth in the bulk and value of our trade is not disputed, while the employers assert that prices have been even less remunerative than at the date of Lord Hatherton's award.

Difficulty of
fixing fair
rate of wages
in pottery
trade

It was urged on behalf of the workmen that if wages were to be regulated by selling prices, they would require from their employers ample figures to enable them to verify their position. In the iron and coal trades, the number of articles, from the price of which the rate of wages is determined, is comparatively small, the standard of quality is more or less uniform, and the price is

adjusted on Change and published to the world. In the pottery trade, the multitudinous number of articles, the wide difference in quality, and the uncertainty as to the prices obtained by the employers, combine to render it impracticable to apply the same rules which have been found to work so satisfactorily in the iron trade.

Without entering further into an abstract discussion, it is clear that the ability of the employer to pay the wages of his workmen increases as trade improves, and declines when it is unprofitable. While contending for the principle that wages depend on price, it will be admitted that its application is attended with peculiar difficulties in the Potteries.

In the absence of more independent sources of information, we must take into consideration in the first place the assertions of the employers themselves. They gave their testimony with unreserved frankness. They endured a severe and somewhat peremptory cross-examination from the delegates of the workmen, with a patience and good humour which cannot fail to exert a conciliatory influence.

The United States afford by far the largest foreign market for our exports of earthenware and porcelain. The recent increase both in the quantity and the value has been shown already in the figures taken from the Board of Trade Tables. It is alleged that prices are lower now than in 1879, and lower by 30 per cent. than in 1872, when the wages were raised to the standard to which the workmen now wish to return. An effort was made at the commencement of the year to raise the selling price by $2\frac{1}{2}$ per cent. The market was so sensitive that the demand immediately subsided. In two months after the prices had been raised they were

Exports.
United
States

lowered by a corresponding amount below their former level.

The rudeness of the tests by which the operatives have endeavoured to check the estimate of employers presents an illustration of the difficulty they experience in ascertaining prices and profits. Earthenware is exported to the United States in packages of from 40 to 80 cubic feet, the average size being approximately uniform. Returns of the number of packages exported are made up periodically and published for the information of the trade. The workmen have availed themselves of these elementary statistics for the purpose of determining the fluctuation in prices. They divide the total value of the exports by the number of packages. The value per package exhibits considerable fluctuations. It rose from 7*l.* 6*s.* 6½*d.* in 1871 to 9*l.* 5*s.* in 1876. It fell to 8*l.* 17*s.* 8½*d.* in the following year; it has since risen to 9*l.* 1*s.* 4*d.*, and has now fallen to 8*l.* 11*s.* While these figures corroborate the assertions as to the fall in prices, they fail to show the full extent of the depreciation. It is stated that two-thirds of the total increase in the exportations of ware to the United States consist of the decorative and more costly descriptions, for which a new demand has sprung up since the exhibition at Philadelphia. Many of the packages sent to the United States represent a value of 100*l.* If, therefore, the average price has fallen, notwithstanding that the packages contained a much larger proportion of more costly goods, it is clear that the price of the more ordinary descriptions has undergone a serious reduction.

Colonies

Several witnesses were called with reference to the colonial markets. Their evidence was conflicting. A serious falling off in the trade with Australia is shown in the Board of Trade returns. With this exception,

the external trade of the Potteries has been fairly sustained in all its principal branches. No evidence was produced to show that English ware was being driven out by continental manufactures to any considerable extent in the colonies. The depression is doubtless of a transitory nature, and is due to causes quite apart from the price of labour in the Potteries.

Turning from the colonies to the Continent, it is represented that our trade can only be sustained by a continuous reduction in prices. An assortment of goods which would have been sold for 100% in 1877 would be sold to-day for 70%. The difference of 30% is covered to the extent of 12 per cent. by the lower cost of materials. Allowing for the reduced price of labour, and the increased use of machinery, there remains a large difference in the returns of the manufacturer.

Continent

When we turn from the foreign trade to the home market, the evidences of progress, stagnation, or decay are attained with great difficulty. At the best we can have only an individual appreciation of the situation. The testimony was unanimous as to the falling off in the demand for goods of an intermediate class, between the most costly descriptions and those manufactured for the million. Customers who would formerly have paid 15% for a dinner set, are probably now content with one costing 4% 10s.

Home market

Satisfactory evidence was given that the dulness of the home trade was not due to foreign competition. In the five years from 1875 to 1879 the amounts of our imports and exports of china and porcelain show little variation, the importations having fallen in value from 336,000% to 280,000%, and the exportations from 1,858,000% to 1,799,000%. If the comparison be extended as far back as 1871, we find that the exports to Germany

Foreign competition

have fallen from 112,000*l.* to 33,660*l.*, while our exports to France have increased from 50,501*l.* to 82,120*l.* On the other hand, our importations from those countries, although small in comparison with the exports, show a continuous decrease in the prices and a considerable increase in the quantities. The imports of ware from Germany in 1871 amounted to 10,234 cwt. of the total value of 62,883*l.* or 6*l.* 2*s.* 10½*d.* per cwt. The imports in 1879 amounted to 16,583 cwt. of the value of 73,186*l.* or 4*l.* 8*s.* 3*d.* per cwt. From France our imports in 1871 were 7,601 cwt. of the value of 59,186*l.* or 7*l.* 15*s.* 8¾*d.* per cwt.; in 1879 our imports were 26,007 cwt. of the value of 148,321*l.* or 5*l.* 13*s.* 9½*d.* per cwt.

While the latest estimates tend to show that the importations from the Continent have not kept pace with our own export trade, and while the manufacturers themselves express no apprehensions, it is obvious that the industry of Staffordshire is being carried on in the presence of threatening rivals, and that any considerable increase in the cost of production of British ware would be followed immediately by a considerable importation from the Continent.

Among the individual experiences of the recent badness of trade, I may particularly refer to the evidence of Mr. Wildman. One department of the business conducted by that gentleman consists in the manufacture of earthenware, in which he has an invested capital of 20,000*l.* Making no charge for interest, and none for his own remuneration, his total profit in 1879 amounted to 555*l.* He will derive an advantage in the present year from the reduced price of labour of 500*l.*, which, however, will be more than counterbalanced by bad debts. It was urged by the workmen that the additions

to certain establishments now in progress could scarcely be accepted as evidence that serious losses were being sustained. It was stated, in reply, that those additions would not represent ten per cent. of the productive capacity of the works which were closed.

The general effect of the ample and scarcely conflict- Award
ing evidence which has been brought before me is clear, and I deeply regret the necessity which compels me to decide against the appeal of the workmen. That regret will be fully shared by the employers themselves.

For several years trade in the Potteries, in the medium and cheaper classes of goods, has been stationary, not to say languishing. It is evident that the same hesitation has been felt in Staffordshire as elsewhere to call on the workmen to submit to a reduction of wages. It is owing to that reduction, however, that a demand has been created, from which the workman has hitherto derived more benefit than his master. The former has had the advantage of full employment, while the latter has suffered by the continued reduction in prices. In Staffordshire the system of payment by the piece is uniformly adopted ; and by their manly determination to seek compensation for a reduction in rates by increased diligence the workmen have been enabled to earn the same, and in many cases higher, wages than before. It was acknowledged by the representatives of labour that the average earnings of the workmen engaged in the manufacture of earthenware of the ordinary qualities were slightly in excess of the potters' ideal standard of 30s. per week. It was indeed asserted by Mr. Owen that if ten per cent. of the better men were excluded the average wages would not amount to 24s.

It was represented by various witnesses that special Special
grievances
grievances were felt in different branches of the trade.

In the flat-pressers' branch women and boys are employed in considerable numbers as attendants on the workmen. In this case it was made the subject of complaint that the award of Lord Hatherton had operated with peculiar severity. The attendants had suffered no reduction, although by the operation of the Factory and Education Acts their wages had risen between 1872 and 1879 from 3s. 6d. to 7s. 9d. per week. It was stated by a cupmaker of forty-six years' experience that while he formerly paid for a 'team' of three or four attendants 12s. he now pays 24s. per week. The answer to these complaints is complete and satisfactory. The attendants are members of the families of the workmen, and the increase in their wages is a direct benefit to the workmen themselves.

The regulations imposed by the Factory Acts were made the subject of complaint, although it is admitted that they are essential to the preservation of health. The protection accorded by the Legislature had been withheld only too long from women and children, who could not of themselves resist the influences which impelled them to become wage-earners too early, and to work too long. With reference to the Education Act, the employers truly say that the incidence of the rates levied by the School Board falls chiefly on themselves; while the workmen reap the benefit in an excellent education for their children at a nominal charge.

In addition to the wages of attendants, there are other deductions from the earnings of the workmen for gas, and for pugging or expelling the air from clay, which give rise to feelings of vexation, and even irritation, out of all proportion to the benefit derived by the employers.

I cannot conclude without expressing my satisfaction

with the conduct of the proceedings throughout the arbitration, in which you have done me the honour to make me your umpire. That the employers should have thought it worth their while to suspend their manufacturing operations for a week to attend such a conference, is in itself a proof that the issue was of vital importance in the present unprosperous condition of trade. They met their workmen with perfect courtesy, consideration, and frankness. To the representatives of labour I desire to tender a sincere tribute of praise for the admirable manner in which they have pleaded the cause of thousands of anxious clients.

While retaining these gratifying impressions, I may remind the workmen that neither strikes nor arbitrations are needed to raise the price of labour in a flourishing and increasing trade. When prosperity returns to the Potteries of Staffordshire, and I hope that it will not long be withheld, the workmen will be borne forward with the employers on the swelling tide, and receive an ample share of the increasing profits of their industry.

XIV

BRITISH TRADE AND BRITISH WORKMEN

ADDRESS DELIVERED AT THE CHURCH CONGRESS IN THE
HALL OF THE NEWCASTLE LITERARY AND PHILOSOPHICAL
SOCIETY, ON OCTOBER 1, 1881, THE ARCHDEACON OF
NORTHUMBERLAND IN THE CHAIR

A SUDDEN call to join the Board of Admiralty, in their annual inspection of the dockyards, has compelled me to anticipate by a few days the part assigned to me in the Church Congress to be held in this city next week. I have to thank you for your attendance at the extra meeting called together this evening.

The Church
and the
Labour
Question

And now let me in a few words explain the reasons of my appearing among you. The Bishop of this diocese has been anxious, and rightly so, that all the interests of the people should receive consideration at the Congress. He has thought that men who are necessarily absorbed in industrial pursuits have a claim to the good offices of the clergy, even in their temporal concerns. The Church will not command the confidence and the sympathies of the masses if it keeps aloof altogether from the business of their daily lives. To correct the mistakes of ignorance, to collect and to publish facts, as distinguished from opinions, concerning the pending controversy on Fair Trade, Free Trade, and Protection—in short, to render any service in the cause of truth, even in the sphere of commerce, is a duty which the

Bishop has thought himself entitled to impose on the friends of the Church. He has applied to me, and I have endeavoured to obey his call by collecting the latest information in the same line of inquiry which I have followed before. I have chosen as the title of the paper—'British Trade and British Workmen.'

Engaged as we are in a keen and close competition with the industry of foreigners in all the neutral markets of the world, and largely dependent on the success of our commerce for our greatness, if not for our very existence as a nation, the relative efficiency of our workmen must always be a question of deep interest in this country. The revival of the cry for protection has given a special importance to labour questions at the present time.

If we look back over the last ten years, we observe with regret considerable fluctuations. Every expansion of trade seems to be followed by a proportionate reaction. It has, however, been shown by Mr. Giffen, in his valuable reports, that the apparent contractions have arisen from reductions in the value, and not in the quantities, of our exportations. The falling off from 1873 to 1878 is mainly traceable to this cause. If trade may have been less profitable, the extent of our operations was not sensibly diminished.

Recent trade
statistics

While admitting with Mr. Giffen that it cannot be accepted as a complete test of relative progress, a comparison of values, if it embraces a sufficient interval, is an indication of the direction in which we are moving. It is stated by Mr. Mulhall, in a volume lately published, that the average product of human industry is 25*l.* per head. A general rise of no less than 12 per cent. has taken place since 1870; the advance in Great Britain being double the European average. The figures for

Great Britain are 53*l.* 13*s.* per head in 1870, and 58*l.* 11*s.* in 1880 ; for Europe, 21*l.* 2*s.* and 23*l.* 4*s.*; for the United States 38*l.* 9*s.* and 40*l.* 1*s.* Whether we make a comparison from decade to decade or confine our view to the most recent movements of trade, we find nothing to justify despondency for the future. In the last report of the Commissioners of Customs the figures for 1879 and 1880 are summarised and compared. In 1880 the produce and manufactures of the United Kingdom exported to foreign countries were valued at 223,000,000*l.*, being an increase of 31,500,000*l.* on the preceding year. Taking some of the principal articles, iron and steel exhibited an increase of 31½ per cent. in volume and 46 per cent. in value. In the cotton trade the exportations of yarn diminished both in value and quantity, while in piece goods our exportation in 1880 was by far the largest ever recorded. In linens, in jute, in woollens, a similar reduction took place in the exports of yarn to be manufactured by foreigners, while the increase was considerable in piece goods, blankets, flannels and carpets. The favourable changes which distinguished our export trade in 1880 have been equally manifested in the present year. All the more important increases have taken place in the more finished descriptions of goods. We have exported less coal, less pig iron, less woollen yarn. We have increased our exportations of apparel and cloth, of hardware and machinery.

Cotton

Our cotton manufactures are so important that it may be desirable to give the leading statistics of the trade. The value of our cotton exports in 1880 reached the vast total of 75,564,000*l.*, being an increase of 18 per cent. over the figures of 1879. While all our usual customers were more extensive purchasers, British India took no less than 485,000,000 yards more of piece goods

than in 1879. It might naturally have been supposed that the cheap labour of India would compete to advantage with Lancashire. In this belief a considerable capital has been invested in cotton mills, in which 40,000 persons are employed. It has been found by experience that we manufacture more cheaply than in India. In the Chinese market we have been equally successful. The 'Times' correspondent, in a letter from Shanghai of January 12, 1880, records in confident language the recent growth of British trade. The gulf caused by a succession of disasters had been well filled up by the gains of the year just closed. 'Except in a season of abnormal depression in America, it was unlikely that the United States would be for many a long day a serious competitor with England in the Asiatic market for piece goods.' Let us pause to ask ourselves how these results have been attained. Is our trade a hot-house plant, forced by subsidies and bounties? Has it been reared under the shelter of protective duties? Is it a monopoly secured to us by commercial treaties? We have entered the lists in free and open competition with the world, and we hold our position by superior cheapness. The average price per yard for cotton piece goods was $7\frac{3}{4}d.$ in 1866, $4d.$ in 1872, and $3d.$ in 1880.

The tariffs so jealously imposed are perhaps the strongest testimony of the high opinion of the British workman and the organisation of British industry entertained abroad. In Russia and the United States our piece goods are charged with duties of from 50 to 30 per cent., while the duties imposed in the French custom houses, under the treaty which will shortly expire, are from 10 to 15 per cent. By a determined policy of protection all foreign goods may be effectually excluded.

Tariffs

Foreign
importations

But the higher the tariff which protects the manufacturer at home, the more certain is he to be beaten in an international competition; and when manufacturing industry has attained the proportions it has reached in England, the loss of the wide market afforded by the non-protectionist and non-manufacturing countries would be poorly compensated by monopoly at home. We have opened our doors wide, and the general body of consumers have been benefited by the admission of certain goods, for the production of which foreign workmen have a readier aptitude, or the raw materials of which are more abundant elsewhere. The importations, which have excited so much apprehension, are insignificant in comparison with the exports of the staple articles of British industry. In 1880, when our exports of cotton goods had been expanded to the vast totals which have been quoted, our imports were valued at 2,500,000*l.* Our exports of iron and steel were 28,390,000*l.*; our imports were 2,425,000*l.* Our exports of machinery were upwards of 9,000,000*l.*; our imports were insignificant. Of woollen manufactures we imported seven and exported seventeen millions sterling. As Mr. Giffen has truly observed, in his essays on finance, 'Every import of a foreign manufacture into England gives occasion for a new exclamation that English industry is threatened. A great deal of the apparent competition of foreign manufacturers is due to the search for a market, which occurs in every time of depression. We know for certain that, on the other side, the complaints abroad of the competition of English manufacturers are loudest at such a time.'

If we test our industrial capacity by a comparison with other countries in special branches of enterprise, we shall find much to justify a sanguine estimate of

our strength. No instrument of human construction and contrivance represents such a concentration and variety of labour as a ship, and especially a steamship. In no form of enterprise is our ascendancy more remarkable than in shipping. In none has our recent progress been more rapid. Our steam tonnage has advanced from 1,212,000 tons in 1870 to 2,949,000 tons in 1880. In the nine years 1870-79, France increased her steam tonnage from 154,000 to 256,000 tons ; while in Germany the increase was from 82,000 to 196,000 tons. In both cases subsidies were largely given as an encouragement to timid shipowners. Unaided by subsidies, British shipowners, as the chief builders of steamships, have acquired a constantly increasing proportion of the trade. According to Mr. Mulhall, we have now 56 per cent. of the carrying power of the world, as compared with 51 per cent. in 1880. In the endeavour to foster their shipping, subsidies and bounties have recently been voted on an unprecedented scale by the French Legislature. The premium authorised by the new law upon the French merchant shipping, if applied in England, would involve a payment of not less than 750,000*l.* for the large steamships now in process of building for the Admiralty list. The further payment for distances run might easily reach 15,000*l.* per annum for a single Atlantic liner. More than 1,000,000*l.* have already been paid in subsidies to French shipping. These expenditures are justified on the ground that shipbuilders must be compensated for the duties on raw materials, and shipowners for the losses sustained by the Maritime Inscription. If the subsidies produce all the effect which those who advocate them anticipate, it is possible that the French people, tolerant as they are of taxation, may at last become impatient under the heavy burden cast

upon the many for the benefit of the few. Should such a reaction ensue, precarious indeed will be the situation of the shipowner in France, dependent on subsidies, and ignorant of the economies which those exposed to unrestricted competition are compelled to study.

Railways

In a still larger sphere of enterprise, which had its origin in England, and which is particularly associated with your own district—I need hardly say that I refer to railways—the industrial capacity of our people has been conspicuous. The comprehensive statistics published by the ‘Railway News’ on the occasion of the Stephenson centenary, show that, in proportion to area, we have twice as many miles of railway as France. Our gross receipts per mile are 3,490*l.*, those of France are 2,612*l.* per annum. The traffic on railways is one of the surest indications of industrial activity, and the working expenses are equally important, as a measure of the general cost of production. In this regard we compare favourably with those countries in which wages have been reduced to a level far below the standard accepted in England. The cost of working in 1880 was 54 per cent. on the receipts in Germany, 58·6 in Belgium, 55·4 in Switzerland, 61·5 in Italy, and 52·4 in Great Britain.

It would exceed the limits of a popular address if this review were extended into further detail. British trade and commerce are a just source of patriotic pride. They represent the continuous and concentrated efforts of toiling multitudes. They have been brought into existence by admirable organisation in the captains of industry. Ingenuity, forethought, and thrift, perseverance in adversity, and coolness and self-restraint in prosperity—these are the qualities by which the wealth

of England has been slowly, and often painfully, accumulated.

It is superfluous to insist on the essential importance to employers of the loyal co-operation of their workmen ; and it may fairly be urged on behalf of the operatives of this country, that they are not behind their continental rivals in an honest pride in sound workmanship, in energy and courage in the face of difficulties, and in the reasonable aims which are kept in view by our large trade organisations. We may or may not approve all the points of the Parliamentary programmes of the Trades Union Congresses. In no instance do we find those visionary and subversive proposals put forward which have such a fatal fascination for similar assemblies at Lyons and Ghent. The opposition to piecework is one of the most unwise features of Trades Union policy ; but where it has been established on equitable terms, diligent workmen are not easily dissuaded from accepting the additional wages to which they are justly entitled. Experience has shown that low wages and weary and exhausting hours of toil are equally unfavourable to cheapness and excellence of production, and to the social improvement of the people. When we are told that at the locomotive factory at Chemnitz the average weekly wages of mechanics and labourers are 16s. as compared with 23s. in this country, and that the Saxon operatives work for 12 or 14 hours a week more than their English rivals, let it not be our aim or desire that the same low rates and long hours of labour should be accepted here. The English operative should rather seek by the diligence and the skill with which he works, when engaged in his employment, to compensate for the liberal wages and the shorter hours of labour conceded in England.

British
workmen

Cost of
living

Turning from the industrial qualities of our population to the cost of living in this country, our situation affords no reason for complaint. In our command of the necessaries of life, our position to-day is not less fortunate than that described, more than a century ago, by Mr. Burke, in his 'Observations on the present State of the Nation.' At Lyons the price of wheat, as given in the returns for 1880, was 54s. per quarter, while the average price for England and Wales was 44s. Of fuel it may be said with even more truth than in the time of Burke, that it is cheaper with us than in any part of the globe. In the price of meat there is no appreciable difference between the markets of Lyons and London. With our abundant supplies, meat would be considerably lower but for the reasons assigned by Burke, 'the uniform increase of consumption and of money. Diminish the latter,' he said, 'and meat in your markets will be sufficiently cheap in account, but much dearer in effect, because fewer will be in a condition to buy. At present the use of flesh here is greater than anywhere else.' With a singular uniformity of statistical detail the observations of Burke are applicable to the Anglo-Saxon race in every quarter of the globe. The annual consumption of meat per inhabitant is 119·10 lbs. in Great Britain, 120 lbs. in the United States, Australia, and Canada, 82 lbs. in France, 84·5 lbs. in Germany, and 57 lbs. in Belgium.

Moral and
material
progress

It is to be feared that the domestic management of our poorer classes is extravagant; but we accept with thankfulness the evidences of prosperity in the extensive consumption of costly articles of food. Other indications of a like character are not wanting. It has already been said that our standard of living is higher than that in any other European country. It is there-

fore a fact of immense significance that the recent census should have shown in the last decade an increase of population for England of 14·5 per cent., as compared with 10·46 in Germany, 6·36 in Italy, and 1·67 in France. The rapid growth in numbers has been happily accompanied by a marked advance in the moral and material condition of our population. The number of paupers has been reduced from 892,000 in 1871 to 692,000 in 1881. The capital of the savings banks increased from 28,000,000*l.* in 1870 to 44,000,000*l.* in 1880, and the deposits in the post office banks from 15,099,000*l.* to 33,744,000*l.* The present Postmaster-General, with a wise statesmanship, has devoted much attention to the encouragement of thrift. He has created facilities, which have been extensively used, for investments in Government stock, and for making deposits of a penny by affixing stamps to slips of paper.

It is a familiar phrase that the poor are becoming poorer and the rich richer. The same discouraging reflections have been made before, and with more truth. In a passage in his diary, written more than half a century ago, the late Mr. Greville, on his return from a trial at the Old Bailey, deplored the frightful contrast between the excess of splendour and luxury and the starved and brutal condition of the criminals whom he had just seen. He feared there was more vice, more misery and penury in this country than in any other, and at the same time greater wealth. The condition of the masses, while it still leaves much to be desired, is at least in the way of amendment.

It is on every ground to be desired that those whose lot it is to labour should have such an ideal of happiness as that described by Professor Dowden in his introduction to the poems of Ebenezer Elliott. As a poet,

born and reared in a Yorkshire foundry, in an age when sympathy for the multitude was less warmly and generally felt than it is to-day, he appealed on their behalf in glowing and harmonious numbers for equal laws and considerate treatment.

But if he loved the rich who make
The poor man's little more,
Ill could he praise the rich who take
From plundered labour's store.

Elliott longed to see the life of the labourer simple and refined, that he should have some leisure, flowers, a good book, a neat home, a happy wife, and glad, innocent children. These are aspirations approved alike by the political economist and the philanthropist.

Commerce

In conclusion, one or two observations may appropriately be offered, which impart a certain dignity to the prosaic and practical subject on which we have been engaged. Connected as we mostly are, directly or indirectly, with trade, it is satisfactory to contemplate its operations as having some nobler result than the mere accumulation of wealth. In his history of democracy, Sir Erskine May has truly said that commerce alone will not create liberty, but without it liberty has been rarely known to flourish. The observation is equally applicable to ancient Greece and modern England. In both cases we see a maritime nation, largely concerned in trade, possessing an influence out of all proportion to its limited territory, the founder of flourishing colonies, and enjoying all the blessings of freedom.

Principles
of business

Lastly, let me be permitted to say that capitalists and employers, conscious of the responsibilities of their position, will find a perpetual call for the exercise of the

best virtues and the highest principles of conduct. They sit in a tribunal, from which there is no appeal, to hear the case of their workmen. Wide experience and knowledge, and consummate qualities of commercial judgment, are often required in order to decide rightly when to yield, and when to resist, the demands of labour. It is not true benevolence to raise the scale of wages to a level which leaves no profit to capital. The transactions of business must be guided by an enlightened self-interest ; but a rich man should never forget that the advantages he enjoys impose corresponding duties, and that a spirit of self-renouncement should prevail in all his dealings with the poor.

XV

*INDUSTRIAL REMUNERATION CON-
FERENCE, 1885*

THE objects of the above conference may be best explained by the following short extract from the 'Times' of January 28, 1885.

The 'Times'
on the In-
dustrial Re-
muneration
Conference

'A very interesting experiment will be made to-day. The first meeting of the Industrial Remuneration Conference takes place in the Prince's Hall, Piccadilly, under the presidency of Sir Charles Dilke ; and to-morrow and next day the Conference will be renewed. It is the outcome of a gift by an anonymous donor, a gentleman of Edinburgh, who devoted a sum of 1,000*l.* for the purpose of elucidating and discussing the following question : "Is the present system or manner whereby the products of industry are distributed between the various persons and classes of the community satisfactory? Or, if not, are there any means by which that system could be improved?" A strong committee, composed of Lord Dalhousie, Sir Thomas Brassey, Mr. Giffen, Professor Foxwell, Mr. F. Harrison, Mr. Burt, Mr. David Dale, and many others, was formed ; and, with the assistance of the Statistical Society, they organised a conference to which 125 delegates, representing every shade of conflicting economical opinions, were invited. . . . A conference which will be attended by eminent statisticians,

economists, and representatives of the working classes can scarcely fail to be instructive. It can settle nothing, even in the opinion of those who take part in the proceedings ; it may, nevertheless, help to educate opinion, even that of those who are not present. . . . To-day the question for discussion—somewhat too academic in cast—is, “Has the increase of the products of industry within the last 100 years tended most to the benefit of capitalists and employers, or to that of the working classes, whether artisans, labourers, or others, and in what relative proportions in any given period ?”

The following report of the proceedings is taken from the ‘Times’ of January 29 :

‘Sir C. Dilke, in his opening remarks, said : “This is a conference presided over by a committee of which a third are representatives of the Statistical Society, and it is as a member since 1867 of the Statistical Society, and as an old member of the Political Economy Club, that I have been asked to occupy the chair. The conference is one of delegates of chambers of commerce, delegates of associations of capitalists, among whom we have Mr. Lowthian Bell, delegates of Trades Unions, among whom we have Mr. Burnett and other well-known men, delegates of friendly societies, and delegates of economic societies, such as Lord Bramwell, who comes on behalf of the Liberty and Property Defence League. The committee only offer a fair field for discussion, which they believe will prove useful. They have no collective opinion, and are not responsible for the opinions put forward by the various writers and speakers. . . .”’

The conference then proceeded to consider the special question set down for the first day. The first paper was read by Sir Thomas Brassey, who said : ‘In assenting to take part in this conference I do so in the



hope that it may be the means of disseminating useful knowledge and experience among the masses whose lot it is to labour. It was well said by M. Turgot : "On peut être opprimé par un seul tyran, mais on peut l'être tout autant et aussi injustement par une multitude." These are not times in which it is well to hold aloof, even from the authors of new theories of industrial and social organisation. As to the tone in which our discussions shall be conducted, I cannot doubt that a generous toleration will smooth the asperities of debate. The late Mr. Jevons truly said, in the introduction to his essay on the State in relation to labour, "The time has come when all class rancour, all bitter terms, all needless reference to former unfortunate occurrences should be laid aside. The economic errors of Trades Unions are, after all, not greater than those which pervaded the commercial and even the governing classes a generation ago."

Evidences
of social
progress

' And now I turn to the special subject of discussion. To attack such a topic exhaustively in twenty minutes is impossible. In the circumstances, I have thought that to bring together the testimony of accredited authorities, giving their conclusions, without attempting to produce their facts, would be an effective method. Beginning with the most recent writers, Mr. Jeans, the able secretary of the British Iron Trade Association, has recently published a pamphlet on the comparative earnings of workmen at home and abroad. Mr. Jeans gives his general conclusion as follows : "There has been within recent years a tendency to the cheapening of articles of everyday consumption, and this movement, running concurrently with better remuneration for labour, has induced a higher standard of living than formerly. There is nothing to show that population is

pressing on the means of subsistence." Mr. Mulhall, whose researches on this subject are known to all students of statistics, in the introduction to his volume, "The Balance Sheet of the World," addresses himself to the special subject selected for discussion by this conference as follows: "All indications point to the conclusion that the number of persons in easy circumstances, or at least above want, is increasing much faster than population." He notes in evidence "the reduced ratio of paupers to population, from 4.79 in 1870 to 3.29 in 1880." He shows an increase of 20 per cent. in the consumption of imported food and tobacco, and 30 per cent. in the deposits in the savings banks. Professor Rogers, who has carried his inquiry on the subject of wages far back into history, and who cannot be suspected of an undue partiality for the hereditary landowners or the capitalist classes, and Professor Bonamy Price, in his treatise on political economy, give conclusions similar to those already quoted. Lord Macaulay said, and said truly, "The more carefully we examine the history of the past, the more reason we shall find to dissent from those who imagine that our age has been fruitful of new social evils. The truth is that the evils are, with scarcely an exception, old. That which is new is the intelligence which discerns, and the humanity which remedies them."

'While we have satisfactory evidence of progress in wealth and general well-being, it is certain that this improvement has not arisen from the increasing profits of capitalists and employers. Writing some thirty years ago, the returns upon safe investments in England were estimated by Mr. John Stuart Mill at from 3 to 4 per cent. In the near future he believed that the annual increase of capital would bring down the rate of profit

Cheapness
of capital

to 1 per cent., but for the counteracting circumstances of waste of capital in periods of overtrading, improvements in production, greater facilities for obtaining cheap commodities from foreign countries, and the perpetual overflow of capital into colonies, in search of higher profits. The present rate of profit upon investments may be gauged with accuracy by tests which it is easy to apply. The high price of the funds and of railway debentures is an evidence at once of the accumulation of savings and of the increasing difficulty of finding more profitable investments. The average price of Consols has advanced from 88 in 1860 to $93\frac{3}{4}$ in 1875. It has ranged from $99\frac{5}{8}$ to $102\frac{1}{8}$ in 1884. Four per cent. debenture stocks of our leading railways are issued at the rate of many millions per year, and the price has advanced to 120. Other indications of a similar character are afforded by a comparison of the net returns of our railways and the premiums upon stocks. In 1882 the net receipts upon an authorised railway capital of 878 millions were 4.32 per cent. The price of the stocks of the more important lines would not return at present prices a rate of interest in excess of the average net receipts for the whole capital invested in railways. The fluctuations in the Bank rate in ten years, 1873 to 1883, have been as follows : $4\frac{3}{4}$, $3\frac{1}{4}$, $3\frac{1}{2}$, $2\frac{5}{8}$, $2\frac{7}{8}$, $3\frac{3}{4}$, $2\frac{7}{8}$, $2\frac{1}{4}$, $3\frac{1}{2}$, $4\frac{1}{8}$, $3\frac{9}{16}$. If the secure profits of business had been greatly in excess of the Bank rate there would have been less money on deposit, and higher rates would have been charged for banking accommodation.

‘The comparison of these figures with similar statistics from foreign countries will show that English labour commands the use of capital at lower rates of interest than have as yet been accepted in any other country, with the exception of Holland. The advantage which

must result to industry of every description cannot be exaggerated. The English landlord is satisfied with three per cent. on money advanced for agricultural improvements. The cultivators of the soil in Germany have to pay to the "People's Banks," established by Mr. Schultze-Delitzsch, rates of interest ranging from 6 to 6½ per cent. The "People's Banks" were specially established to supply loans to borrowers in humble life at a lower rate than they had hitherto been called upon to pay. They tend to deprive capitalists of their monopoly in the profits arising from money lending. The assessments of the income tax are another indication of the average profits of our industries. The recent fluctuations in the returns were described by Mr. Gladstone in his Budget speech on April 4, 1881. The diminished returns of the income tax are the more remarkable because in certain descriptions of property, such as houses and railways, the onward movement is automatic. In house property, in the six years 1876-82, the annual value increased from 97,000,000*l.* to 121,000,000*l.* A cursory examination of the dividends of the joint-stock companies connected with the coal and iron trades will show that in 1884 the *maximum* returns rarely reached, and still more seldom exceeded, 10 per cent., while the instances were numerous in which no dividend was declared.

'My allotted time is nearly exhausted. I have endeavoured to answer the first question submitted to this conference by laying before you the impartial testimony of the most competent economists. Their opinions lend no support to the vague impression which prevails that the rich are growing richer and the poor poorer than before. Progress—real progress—has been made towards a more satisfactory social order. But we are far

Co-operation

more even distribution of wealth, a more complete identity of interest between capital and labour, are earnestly to be desired. In so far as that consummation is to be accomplished by the workmen themselves—and they must be active instruments in their own advancement—our hopes for the future rest on co-operative industry. Efforts must commence with simple forms of industrial organisation, which require little capital and are free from the fluctuations so painfully felt in international commerce. In industries which cannot be organised so readily on the co-operative plan, the extended operations of the joint-stock companies will secure the publication of profits, and afford opportunities to the workmen for participation, as holders of shares, in the profits of capital. One condition is essential. The workman must save from his present earnings. This is easy for the Celt. It is hard for the vigorous, open-handed Englishman. The improved returns from savings banks and building societies encourage the hope of a growing capacity for thrift in the Anglo-Saxon race.

Respon-
sibility for
investments
of capital

‘Having referred to the workmen, what should be said to the capitalists? Although capital is amassed, for the most part, by individual contributions of very modest proportions, the aggregate sum is immense; and as it is capable, under wise direction, of conferring the greatest benefits on the community, so by injudicious investments deplorable suffering and misery may be caused. At various epochs in our industrial history the public has been possessed with manias for the extension of railways, mills, mines, and ironworks, and for loans to bankrupt States. At the present time our industry is depressed by former reckless over-production. The number of hands employed in shipbuilding has been reduced, according to Mr. Jeans, from 94,700 in 1883

to 59,200 in 1884. If, as Mr. Greg most truly said, the money squandered in many a barren enterprise had been expended on comfortable dwellings for the labouring poor, an inestimable boon would have been conferred. The sharp lessons of the past should teach caution, not discouragement. The fact which lies at the root of competition is the insufficiency of work for the workmen who are seeking it. Of all forms of investment at present open to British capital, none could confer a greater benefit than the building of industrial dwellings and judicious advances for colonial enterprise. Among the owners of capital the wealthy are so few, that, as an economic force for the regeneration of society, their utmost efforts of self-denial would exercise no appreciable difference. The excesses of self-indulgence are justly held up to obloquy.

I built myself a lordly pleasure house,
In which at ease for age to dwell.
I said, "My soul, make merry and carouse,
Dear soul! for all is well."

To the truly wise man a life of ease presents no allurements.'

XVI

INSTITUTION OF CIVIL ENGINEERS

SPEECH DELIVERED AT THE ANNUAL DINNER ON
SATURDAY, MARCH 10, 1888

Of the ser-
vices ren-
dered by
contractors
for public
works

SLENDER as are my claims to the honour of proposing the toast of the Society whose hospitality we enjoy this evening, it could not be proposed by one more deeply indebted to the engineering profession. I am proud to be the son of a former member of its Council, who still lives in the kindly memory of many old and faithful friends assembled at these tables. Speaking as the son of a contractor, I shall ask leave to say a few words on behalf of a class whose useful services are little appreciated by the general public. To you, the engineers, of right belong the higher honours. You conceive, you design, you control in execution. The contractor organises vast armies of labourers, collects materials, and contrives cheap and expeditious methods of work. The importance of such services by honest and experienced contractors will, I know, be cordially acknowledged by the Institution of Civil Engineers.

The navy

Having said a word for the contractors, I must not forget the navvies. In the marvellous development of modern industry, in 'loom and wheel and engin'ry,' we lament an unavoidable tendency to produce physical deterioration, which we do our best to correct by people's

palaces and people's parks. The work of the engineer is done under better conditions. By a favourable process of evolution, the farm labourer became the stalwart navvy, whose marvellous powers of excavation in rock and clay, and whose courage and endurance in the depths of dripping tunnels, have been the wonder of every country in which he has been employed. The migration of 5,000 English navvies with their families, for the construction of the Paris and Rouen Railway, is a memory of my childhood which will never fade. I make bold to say that that peaceful invasion with the pickaxe and the spade produced an impression of the power and energy of the British race, which might almost be compared with that wrought by the achievements of our archers under Edward and Henry. In the Crimea, the arrival of 600 English navvies at Balaclava, in the darkest hour of the siege of Sebastopol, did much to turn the tide of battle in favour of our arms ; and I shall hazard the opinion that if the engineering talent of this institution, and the labour of English platelayers and Arab workmen, had been freely and early used, the advance on Khartoum from Suakim would have been accomplished with an expedition not otherwise attainable.

And now I must deal with topics more immediately relating to the toast I have to propose. On assuming the chair, your President, in November last, in reviewing the progress of engineering in the fifty years of Her Majesty's happy reign, gave some impressive statistics. The 200 miles of railway of 1837 had grown to 19,000 in the United Kingdom, 22,000 in the colonies, and 13,000 in India. A capital had been expended exceeding by 100,000,000*l.* that tremendous National Debt which is at present under treatment at the hands of a

Achievements of engineers

gifted financier. Turning from the history of the past to the achievements of the present, if the iron road is less a novelty than in the days of George Stephenson, the feats of the engineer were never more daring and more brilliant than they are at the present time. Such works as the Severn Tunnel, those great bridges over the Ganges which I have lately visited, the Tay Bridge, and that crowning effort, the noble bridge over the Forth, attest continuous progress. Let us consider for a moment the effect of the development of engineering science upon moral and material progress. It supplies to our teeming population half the food they consume. It has reduced prices. It has improved all the conditions of life. We have better sanitation, water supply, and lighting in our towns, greater security of life at sea, more seaworthy ships, more capacious harbours, more powerful lights on the coast. Social relations can be more easily maintained. News and knowledge are more widely diffused. A more ready access is given to the centres of culture, learning, and the arts. Unknown countries have been opened up with marvellous rapidity. Nowhere is the effect of the progress of engineering more strongly marked than in a country of an ancient and imperfect civilisation. In India, social and religious prejudices are being overcome, the danger of famine has been averted, and our rule has been strengthened.

The future
of civil
engineering

Great as is the work already done, a wide field remains, upon which the engineer has scarcely entered. We have begun in Egypt and at the Cape. We have yet to penetrate to the centre of Africa. China, with its teeming millions, is only beginning to entertain the idea of railways. Burmah, with its rapidly increasing population, offers a new opening for enterprise.

I have spoken this evening as the unworthy representative of a pioneer of railways. In proposing the toast which has been placed in my hands, I think not of the past, not of the men whose achieved success makes them independent of extraneous aid. I think of the future. I think of the young men who are coming forward under the guidance and protection of this institution, to follow, as I trust, with perseverance, ability, and distinction, the honourable profession of a civil engineer. I have much pleasure in proposing 'Prosperity to the Institution of Civil Engineers,' associating the toast with the name of its worthy president, Mr. George Barclay Bruce.

XVII

THE LIGHTERMEN OF LONDON

LORD BRASSEY'S AWARD ON MATTERS IN DISPUTE BETWEEN
THE LIGHTERMEN OF THE PORT OF LONDON AND THEIR
EMPLOYERS, SEPTEMBER, 1889

AT a conference between the lightermen and their employers, held at the Mansion House, on September 23 and 24, 1889, three documents were submitted for the consideration of the umpire : (a) An agreement made between the employers and employed, and ratified by the Lord Mayor, in which the principle was laid down that a day's work should be 12 hours, and a day's pay should be 6s. ; (b) a printed statement of further demands on the part of the lightermen ; (c) a counter-proposal from the employers.

Having heard at length the arguments on both sides, I award as follows :

1. That the day shall be from 6 A.M. to 8 P.M., give and take, according to the tides ; but in all cases where the docks, wharves and ships commence work at a later hour than 6 A.M. (say 8 or 9 A.M.), the men shall only be expected to be in attendance with their craft for loading or discharging at the time when the ship, wharf, or dock to which they are sent commences work. In accordance with the terms already accepted in principle, payment to be at the rate of 6s. for 12 hours' work. When the

circumstances require that the lightermen shall work, or be in attendance, more than 12 hours, such additional work or attendance shall be at the rate of 1s. per hour.

2. Orders to be given out between 6.30 and 8 P.M. Men waiting orders shall, after 8 o'clock, be paid at the rate of 1s. an hour while in attendance by request. The compensation for detention shall not be payable where a night's work is given. Where a man's work closes earlier than 7 o'clock P.M. he shall remain for half an hour at the office, waiting orders, without claiming payment for so waiting.

3. That for night work, from 8 P.M. till midnight, the payment shall be 4s. For a full night's work, from 8 P.M. till 6 A.M., the payment shall be 6s. The foreman or others giving orders to define before the night's work commences whether it shall be a long or short night.

4. The early turn-out, from 5 A.M. to 6 A.M., shall be paid 2s. extra.

5. That Sunday work be paid, up to 10 A.M., 4s.; a whole day, 8s. Men called upon to work after 12 o'clock noon to be paid 6s.

6. That expenses be arranged between each master and his own men.

7. That the apprentices be paid at the following rates: Third-year apprentices, 3s. per day, 2s. 6d. per night; fourth-year apprentices, 3s. 6d. per day, 3s. per night; fifth-year apprentices, 4s. per day, 3s. 6d. per night.

8. This award to come into force on November 4, 1889.

Memorandum

In coming to a decision, I have been mainly guided by the agreement already entered into by the masters and workmen. In that agreement the principle was accepted that the day's work should be 12 hours, and the day's pay 6s. In the discussions on which I have been asked to adjudicate, the masters strongly urged that the circumstances of their trade required a certain elasticity as to the hours for commencing and concluding the day's work. It seemed equitable that the men should make a concession on this point, and that, on the other hand, the standard of payment should be sustained by according a double rate of wage for overtime beyond the 12 hours. While a large amount of night work has been shown to be necessary in the lighterage business of the port of London, it seems fair that a liberal rate should be paid for such work. The amount of pay which I have awarded has been framed as far as possible in conformity with a scale agreed upon between the employers and the lightermen. The more liberal scale for the hour between 5 A.M. and 6 A.M., and the compensation for attendance in the evening, waiting orders, were proposals initiated by the employers. While a certain amount of Sunday work is inevitable, it may fairly be claimed that the pay should be at an exceptional rate. I strongly recommend that a permanent Board of Conciliation should be appointed for mutual consultation and negotiation between the lightermen of the port of London and their employers.

(Signed)

BRASSEY.

September 24, 1889.

XVIII

*THE ATTITUDE OF THE CHURCH TOWARDS
LABOUR COMBINATIONS IN RESPECT OF
THEIR AIMS AND THEIR METHODS*

AN ADDRESS DELIVERED AT THE FOLKESTONE CHURCH
CONGRESS, TUESDAY, OCTOBER 4, 1892

I AM here to-night for the twofold object of expressing attachment to the Church, and sympathy with the claims of labour. The Church cannot accomplish her work of spiritual and social improvement unless she keeps in touch with all the great interests of the country, and all the best aspirations of the people. Ours is essentially an industrial nation, and our clergy should be acquainted with all which makes for the advancement or the decline of our industries. On their prosperity many millions of people depend. Moral progress and spiritual elevation cannot be looked for in a population living in a state of physical degradation.

I subscribe with all my heart to that fine passage, which I may appropriately quote, from Mr. John Stuart Mill : 'If the bulk of the human race are always to remain, as at present, slaves to toil in which they have no interest, and therefore feel no interest, drudging from early morn till late at night for bare necessaries, and with all the intellectual and moral deficiencies which that implies ; without resources, either in mind

or feeling ; untaught, for they cannot be better taught than fed ; selfish, for all their thoughts are required for themselves ; without interests or sentiments as citizens and members of society, and with a sense of injustice rankling in their minds equally for what they have not and what others have—I know not what there is which should make a person of any capacity of reason concern himself about the destinies of the human race.’

Ideal condition of industry

In an ideal system of industrial organisation, the interests of labour and of capital would be identical. The capital, which is as essential as labour to production, would be provided by the contributions of the workers. This was the ideal of John Stuart Mill. His attention had been drawn to two experiments in co-operative administration in France, in which, by the self-denial and philanthropic labours of the employers, a substantial improvement had been secured for the workmen. A quarter of a century has elapsed, and it cannot be said that the co-operative method has made real progress. Several experiments have been tried. In most cases the results have been disastrous. Even where the workpeople who have raised the capital have been of first-class ability, and have provided themselves with the newest machinery, they have failed. The mercantile qualities required for the successful conduct of business are more rare than might have been expected. It is a further obstacle to success that the workers in a co-operative concern are naturally anxious to control the management. In such matters a republican constitution is unsuitable. The difficulties of co-operative production may be overcome hereafter. At present we must assume that industrial operations will be carried on by workers who will take their reward in the form of wages.

While the system on which the workpeople are paid

remains the same, we shall see an increasing tendency to the concentration of industrial work in large establishments. In the severe competition of the present day the weakest must go to the wall, and success will remain with those having sufficient capital to organise on a large scale, and to work with the latest machinery. It follows that the personal relations between employers and employed will not be those of former times, when the master and his men were fellow-workers in the same workshop, with slight differences in the amount of remuneration earned, and in the mode of living.

Modern
tendencies

Trades Unions have been a natural outcome of the new system of industrial organisation. They must be accepted, not as a necessary evil, but as the only means by which employers can carry on negotiations with those whom they employ, and the only agency by which they can secure that the terms of an agreement will be observed. Trades Unions, when led by inexperienced men, may be unreasonable and aggressive. The officers of the older and most powerful Unions are men who understand the conditions of trade, and who exercise a moderating and pacific influence. The influence of the clergy should not be exerted in antagonism to the principle of trades unionism.

Trades
Unions

The clergy will be anxious to do something more than merely refrain from opposing a movement which is inevitable. Recognising that the relations between capital and labour necessarily involve contention and discussion, they may wish to know how far their services may be useful in the capacity of mediators and peace-makers. Directly, I do not think that they can do much. I should be sorry to advise them to offer their services as arbitrators. Both employers and operatives are equally reluctant to commit themselves to the judgment

Sphere of
the Church
in relation
to labour

of an outsider, who knows nothing of the matters with which he may be called upon to deal, and who, in the absence of knowledge, is strongly tempted to seek for a compromise, whereby he may make some concessions to the demands pressed on either side.

Courts of
conciliation

The true method of averting conflicts between labour and capital is the establishment in every important trade of a court of conciliation. The testimony before the Royal Commission in favour of such tribunals is unanimous. Those who might have become disputants, being brought face to face at frequent intervals, have learned to appreciate one another's circumstances and difficulties. Mutual sentiments of personal regard have sprung up, of the happiest augury for the future. The clergy cannot use their influence to better effect than in favouring the establishment of courts of conciliation in every trade and in every district in which difficulties are likely to arise.

Strikes

It is believed that the more complete organisation of the employers and employed for the protection of their mutual interests will increase the reluctance on both sides to enter into struggles which will be more and more prolonged in proportion as the contending parties are prepared to endure the losses consequent on a suspension of industry. Some of the strikes which have involved the greatest sacrifice to the workers have ended in their defeat. The influence of the clergy should be used with all possible tact and discretion in preventing strikes. Their weight with both the contending parties will be greater if, by knowledge of the facts and impartiality of judgment, they are enabled to suggest a fair basis of compromise. Never was the episcopal office more signally beneficent than when the Bishop of Durham interposed, in the present year, to induce

the mine owners and miners of his diocese to come to terms.

It would be unreasonable to claim from every minister of the Gospel a competent knowledge of industrial questions. In every great profession there must be diversities of operations. While some will be deeply engaged in theological studies and others in their strictly parochial duties, men will doubtless be found who will have the opportunity and the ability to master industrial problems. It will be their duty to enlighten the whole body of the sacred profession to which they belong. Happily, the essentials of the subject are easily mastered by intelligent and unprejudiced minds.

Study of
labour
problems

* * * * *

Those who framed the plan for the present Congress were well advised in including, as one of the subjects for discussion, the relations of the Church to the labour question. The clergy should be messengers of peace and wise counsellors in every form of trouble. This high and noble office they cannot fully perform for the busy workers and operatives committed to their charge without giving due attention to the difficult problems we are discussing to-night.

XIX

SOCIAL SCHEME OF GENERAL BOOTH

SPEECH AT HASTINGS, AT A MEETING CALLED TO RECEIVE
A STATEMENT FROM GENERAL BOOTH, NOVEMBER 17, 1892

IN occupying the chair to-night, I assume a grave responsibility. I am an attached member of the communion in which I was brought up, and in which I hope to die. I have never attended the services held by the Salvation Army. So far as I know, no questions have been raised as to the principles of morality which are inculcated ; but any agency by which the drunken can be made sober, the idle industrious, the dissolute pure, and the hopeless hopeful, cannot be far removed as to its teaching on points of conduct from the most orthodox communions of Christian men.

' In Darkest
England '

I have thought it necessary to make these observations, although it is not to support the religious work of the Salvation Army that we are met together this evening. We are here to receive a statement in reference to a social scheme. Of the methods and the aims of the work already undertaken, a graphic description was given in the pages of ' In Darkest England.' No volume of our contemporary literature has been read with deeper interest. The remedial measures proposed commended themselves widely, and large sums were subscribed. That schemes so novel should be severely criticised was

to be expected, and some of the detractors have gone so far as to insinuate that there has been malversation. The accusations and the answers have been submitted to the scrutiny of an able, independent, and influential committee. While such an inquiry is pending, General Booth cannot reasonably look for further large contributions. He will, doubtless, be glad to receive promises of aid, conditional on the report of the committee being found satisfactory.

Passing from the personal questions, we shall all listen to-night to General Booth, in sympathy with the object which he has in view. For what is that object? It is to raise the helpless from the slough of despond into a condition to earn an honest living. Is it possible to see and know of the misery in our great cities and congested rural districts and not wish to stretch out the helping hand, so far as we are able, to all who are engaged with earnestness and sincerity of purpose in the rescue of the drowning? Let us, however, cherish no illusions. The difficulty of the task is illustrated in the experiences of General Booth himself. Both he and another worker in the same field, Mr. Charles Booth, are agreed that the most capable of those rescued from vagrancy in the streets should be removed into the country and distributed upon the land. Such an operation is, of necessity, costly. In sending a few hundred men, some for short periods only, to a farm of 1,100 acres in Essex, the men living in barracks and deprived of the comforts and full blessings of family life, more than 50*l.* per head has been expended in the course of the first twelve months. Further, it is obvious that the barrack life at present established in General Booth's colony cannot be accepted as a permanent social condition. To raise these destitute men into a happy and

Best mode
of giving
relief to
destitute

wholesome family life, a great scheme of emigration must be carried out. The colonies offer the widest and in many respects the most suitable field. Removal to the colonies involves a considerable expenditure, and it would be in vain to look for the repayment of advances. It is not possible to give relief to the able-bodied poor in England upon easier conditions than those at present enforced. The lax administration of the poor law in this country brought the masses of the people to the verge of ruin. The classes living on the brink of pauperism are only too ready to abandon the effort to earn a living, if the means of subsistence can be obtained from any other source. The relaxation under Gilbert's Act of the tests previously enforced led to an almost universal pauperism. In the history of the English poor laws a case can be cited in which the collection of the poor rates had actually ceased. The burden had become so great that the landlords preferred to give up their rents, the parish their tithes, and the farmers their holdings, rather than pay the rates. The Poor Law Amendment Acts of William IV. brought the much needed reform. The result in Sussex was to reduce the poor rates from 18s. in the *l.* in 1834 to 8s. 7*d.* in the *l.* in 1837.

Last year nearly 11,000,000*l.* were expended in Great Britain and Ireland in the relief of the poor in and out of the workhouses. In comparison with that expended in public for almsgiving, the sum asked for by General Booth is as nothing. The relief afforded was sufficient only to give the barest necessities of life. It would have cost three times the sum to provide conditions of comfort for the 900,000 indigent persons who were relieved from the poor rates. It is obvious that society would sink under such a burden.

I need say nothing more to show that where the social condition of great multitudes is in question the main work of moral and material elevation must be accomplished by the people themselves, by self-help, by self-denial, by prudence, and by industry.

I have considered it my duty to make ample admissions to those who, with Professor Huxley, have denounced General Booth's efforts mainly on economic grounds. I admit that no personal exertions, no private organisation, not the almsgiving of the entire nation, can effectively and completely cope with evils of such magnitude as are contemplated in the social scheme described in 'Darkest England.' For those who have the control of capital, its best use for the support of the labourer will be found, not alone or chiefly in almsgiving, tending as it does to pauperism and to the discouragement of independent labour, but rather in the payment of liberal wages in reproductive industries. I am not the less convinced that it is morally wrong and politically unwise to abandon the submerged tenth to the unchecked operation of the laws of political economy. When every member of society shall have done his best in the state of life in which he has been placed by Providence, there will still remain many victims of unmerited misfortune. It has been truly said that to apply to the more squalid sections of any city maxims applicable only to the economic man is little less than preposterous. Such populations do not migrate: they abide in their lot, sinking lower in helplessness, hopelessness, and squalor. Economic forces have not the slightest virtue, either to give them higher wages, or to make them deserving of higher wages. The poor we shall always have with us. The field for the efforts of philanthropists may gradually become narrower. It will never be altogether closed.

Self-help

Field for
benevolence

In conclusion, murmurs have been heard because liberal gifts have been made to General Booth. It has been said that the subscriptions received by him have diminished the income of other benevolent societies, which, it is alleged, are more deserving. It is a sufficient reply to these objections to point to the income-tax returns. From a national revenue of 700,000,000*l.* it is idle to argue that 30,000*l.* cannot be provided for General Booth without diminishing the contributions bestowed elsewhere. By stirring up sluggish consciences through the revelations which he has made of the miseries existing in our midst, and by the many practical methods suggested for giving something to do to idle hands of slender capacity, General Booth has rendered a public service which deserves to be received with something more generous and more sympathetic than the carping criticisms of those, who, in all probability, have no alternatives to suggest in the presence of portentous evils.

XX

WOLVERHAMPTON CHAMBER OF COMMERCE

SPEECH AT THE ANNUAL DINNER, AT THE STAR AND GARTER
HOTEL, WOLVERHAMPTON, JANUARY 11, 1893

I THANK you from my heart for your kind reception and the cordial manner in which you have drunk my health. Possibly you have invited me here because I was born in this county—in the town of Stafford, and at a time when my father was engaged upon his first railway contract. Whatever may have been the cause to which I owe your invitation, let me assure you that it is an honour which I much appreciate to be the guest of the Chamber of Commerce of Wolverhampton, and to be invited to respond to the toast of ‘Prosperity to the Commerce of the Empire.’ The subject is of universal concern, and specially to the son of a great captain of industry, who owes everything to his father’s arduous labours as a pioneer in the construction of railways. I regret that it falls to my lot to address you at a time when it is impossible to offer congratulations on a state of general prosperity. For a long period the tendency has been downwards. Perhaps no evidence is more conclusive than that afforded by the income-tax returns. The main cause of the diminished profits of business has been clearly demonstrated by Lord Playfair, and by other leading authorities, European and American. Improvements in machinery, both for the purposes of manu-

Depression
of trade

facture and transport, have profoundly altered the conditions of trade. The distribution of commodities has been accelerated and cheapened, while the power of supply has been increased beyond the immediate demands of the world. The same causes have been long at work, but in a less degree. They induced some gloomy forebodings in the mind of Sir Robert Peel.

Over-pro-
duction

Recognising the causes which have brought about the present want of prosperity, we seek the remedies. We must increase consumption by opening new markets. Meanwhile we must check the undue tendency to over-production, most marked when profits are falling. Let me give an illustration. I am well acquainted with the affairs of a certain coal company in South Wales. We shared in the short-lived but excessive prosperity of trade in the past. We suffered greatly from the prolonged depression which followed. We sought compensation for the fall in price by increasing the output. Our production ultimately reached 1,500,000 tons annually, and yet for many years there were no dividends for shareholders. Is it not clear that the policy we were pursuing was unsound? We were exhausting our mines, while, by increasing the demand for labour, we were making it more difficult to reduce the cost of working. At the present time we are again face to face with a rapid fall in prices. I trust it may be met by wiser measures. I might extend these remarks to other branches of business, and particularly to shipping. Nowhere are the evil results of over-production more conspicuously seen. Our shipowners have great advantages over all foreign competition in the cost of building and fuel, and in the supply of competent masters and engineers. Their business should be profitable if building were not carried to excess.

Turning to the opening of new markets, Africa has of late chiefly engaged the public attention. Mr. Rhodes, that splendid specimen of a pioneer Englishman, is advancing with rapid strides from the Cape of Good Hope into the regions north of the Transvaal. Sir Gerald Portal has started for Uganda. It is well that Uganda has not been abandoned. To have abandoned Uganda would have been to put aside our duty both in the cause of Christianity and the cause of civilisation. It is much to be desired that an opportunity may offer for pushing forward a railway from Egypt by the Nile Valley into the fertile region of the Soudan. In recent years the trade with India has been greatly expanded through the introduction of railways. We may look for like results in China when the prejudices of the Tartar rulers have been overcome. Siam, Burmah, Asia Minor offer a wide field, as yet unoccupied, for the construction of railways.

Africa

China

In proportion to their population, our colonies are our best customers, and trade is steadily expanding. The rapid growth of the colonies could only have been accomplished by the aid of the mother country. It may be prudent for borrower and lender to defer for a time the issue of further colonial loans. I should deprecate any permanent diversion of the stream of investment from colonial securities into other channels, less reliable and less productive of direct benefit to our home industries.

Colonies

Whenever trade is languishing a cry for protection is sure to be raised, and plausible arguments will find enthusiastic audiences. On the continent of Europe nearly every tariff is more or less protectionist, and some are absolutely prohibitory. France may be regarded as the leader in the movement for protection, but able advocates

Protection

of free trade have never been wanting. The report from the permanent Commission appointed by the French Government to value the goods exchanged with foreign countries strongly condemns a protectionist policy. Sir Joseph Crowe, our commercial attaché in Paris, gives extracts from this report in a recent blue-book, which deserve attention. The commissioners point out that while the national market has been reserved to the home producer, his trade is conspicuously wanting in elasticity, because he is unable to compete with a free trade country such as England. The French manufacture cotton goods of the value of 22,000,000*l.* a year. Their exports, however, do not exceed 500,000*l.*, of which one-fifth go to Algeria, whereas England supplies to the Algerian market five times as much weight of cotton goods as France, with all her local advantages. Referring to the duties on tissues, the commissioners remark that the manufacture of made-up clothes represents a foreign business of 12,000,000*l.* To increase it, nothing more is required than the free import of materials. To turn from France to the United States, at the recent presidential election a broad issue between protection and free trade was placed before the electorate, and a verdict was pronounced by an overwhelming majority against the McKinley tariff. Intolerable burdens had been laid on the general body of consumers. In iron and steel alone, the increase of cost, due to the protective tariff, has averaged for the last ten years 70,000,000 *dols.* a year. Less than 3,000,000 workmen are engaged in the protected industries, and they have no advantage in rate of wages over the far larger number engaged in free industries. Agriculture is the staple industry of the United States. In the six years ending January 1, 1890, the export of domestic products reached the enormous

total of 4,304,000,000 dols. It is the opinion of competent experts that the prices realised in foreign markets were far less favourable than they would have been if the buyers could have sold, and the American producers could have bought, goods which they would have been glad to purchase but for the restrictions imposed by a prohibitory tariff. A new era in fiscal policy has now been inaugurated. We may look for a better demand for our commodities in the States and for a keener competition on the part of the American manufacturers in neutral markets, such as South America and India. The change should prove a mutual advantage. Trade must always be more prosperous when freed from artificial restrictions.

An eight hours bill has become a burning question. The witnesses from the textile industries before the Royal Commission on Labour hesitated to advise legislation. They were apprehensive, and justly so, of foreign competition if the English workers were unduly fettered. A contrary view was expressed on behalf of the London dockers by Mr. Tillet and others. They desire to secure more employment for casual labourers, presumably of inferior capacity to the permanent men. All will sympathise with aspirations for more leisure for recreation and culture. All will agree that in many trades there is occasional, and in some chronic, overwork. All experience shows that the best economic results are obtained where the demands upon the energies of individuals are not carried to excess. There are insuperable objections to interference by legislation with the freedom of adult workers. Looking to the steadiness of work in some trades, and the uncertainty in others, and to the differences in the severity of labour and the degree of skill required, it is evident that any law of general applica-

Eight hours
Bill

tion must be unequal. The Belgian code contains no enactment limiting the hours of adult labour. In France the laws affecting the subject apply mainly to women. It is the same in Germany. In several of the States of the American Union laws have been passed limiting the hours of labour, which by tacit consent remain a dead-letter. Throughout the Union artisans and mill hands of all classes, including the members of Trades Unions, work sixty hours a week. From a return obtained by the late Mr. Bradlaugh, it would appear that no laws affecting the hours of adult male labour exist in any of the colonies except New Zealand, where, under the Coal Mines Act of 1886, certain kinds of mining work are limited to eight hours a day. In Australasia an eight hours day has been customary in all the laborious trades. It has not been made compulsory by legislation. In one industry only, that of mining, would it be possible in this country to make an eight hours day compulsory without interfering with existing practice. The conditions which it is proposed to establish by law having already been obtained by negotiation, it is an act of doubtful policy to create a precedent for legal interference with the hours of labour.

Business
character

A few more words in conclusion. We are justly proud of the merchants and manufacturers by whose efforts, sustained through many generations, our country has been brought to her place of eminence in trade and commerce. Great qualities are needed to win success in business—concentration of mind, strength of will, directed on a clearly defined object, continued and persevering effort. To these we may add, with Professor Marshall, self-reliance, independence, deliberate choice, and forethought. Even when all these qualities are

present, and are faithfully and diligently exercised, mindful of the wise caution of the historian Clarendon, we must not expect a greater certitude in the consultation of business than the business of the world is capable of. The best trained experience, the keenest forethought, will give no certain light when we attempt to anticipate the rise or fall of prices, and the wayward caprices of trade fashion. In all circumstances one quality can never be dispensed with. 'An honest man's the noblest work of God.' Nothing will so conduce to the prosperity of our trade as the maintenance of the national reputation for truth and justice, and for honesty, courtesy, and liberality in all our dealings.

APPENDIX

LE CONGRÈS DES COOPÉRATEURS ANGLAIS.¹

ON nous écrit d'Halifax, le 7 avril : L'Angleterre est bien vraiment la terre classique du parlementarisme. Non seulement elle possède son grand Parlement national, mais encore, à côté de celui-ci, se réunissent une série de petits Parlements libres représentant, qui un intérêt, qui une idée, quelquefois l'un et l'autre : congrès ou conférences des ouvriers, des patrons, des marchands de spiritueux, des *teetotallers* ou partisans de la tempérance, des partisans de l'instruction, des Eglises dissidentes, de l'Eglise officielle, autant de Parlements fonctionnant sur le modèle de celui de Westminster.

Le congrès coopératif, en ce moment réuni ici, représente évidemment un intérêt et une idée : un intérêt, puisqu'il s'agit de faire entrer dans la poche des consommateurs ou des ouvriers tout ou partie du profit qui va aujourd'hui dans celle des commerçants ou des capitalistes entrepreneurs d'industries. Je dis : tout ou partie, parce que si les coopérateurs font une guerre à mort aux boutiquiers, ils ne veulent, quant aux capitalistes, qu'intervertir les rôles. Et encore, ainsi que je vous l'écrivais au mois de janvier de Manchester, y a-t-il un certain nombre de coopérateurs anglais qui veulent tout

¹ *Journal des Débats*, April 10, 1874.

simplement substituer, dans l'industrie, le gouvernement des petits capitalistes associés à celui des grands. Je dois dire tout de suite que ces coopérateurs ne forment pas la majorité, j'en ai eu la preuve aujourd'hui même.

Le Congrès se réunit dans le Mechanics' Hall. C'est une vaste salle un peu plus longue que large, dont le plafond est très élevé, qui reçoit le jour par une double rangée d'immenses fenêtres. C'est la plus belle que j'aie encore vue en Angleterre ; le plafond, légèrement cintré, est revêtu de rosaces, les murs sont ornés de pilastres et de chapiteaux. Une tribune à balcon doré occupe une des extrémités ; en face est la plate-forme où se placent le bureau des réunions, les orateurs et le public privilégié. Pour le moment, le parterre est occupé par les trois cents délégués environ qui forment le Congrès ; la tribune, par le public assez nombreux ; la plate-forme, par le président, le comité permanent et quelques hommes importans du mouvement. N'oublions pas : devant l'entrée est placée une longue table que reçoit les reporters de tous les journaux de la contrée et quelques-uns de Londres.

Dans le fond de la salle et sur les côtés sont exposés les produits de certaines associations, principalement des étoffes, lainages ou cotonnades aux couleurs voyantes ; il y a aussi des souliers et jusqu'à deux énormes morceaux de charbon provenant d'une mine coopérative.

Sur l'estrade se trouvent M. Thomas Brassey, membre du Parlement, qui a présidé la première séance et prononcé l'*inaugural address* ; le professeur Goldwin Smith, divers hommes connus pour leur dévouement à la cause coopérative, MM. Ludlow, Lloyd Jones, Thomas Hughes et Morrisson, anciens membres du Parlement.

Ces deux derniers gentlemen sont, à ce qu'on assure, par leur malechance même, la preuve de l'extension que

prend la coopération en Angleterre. Ils auraient échoué parce que les boutiquiers des bourgs qu'ils représentaient ont fait cause commune avec les conservateurs, par haine et par crainte de la coopération. Je vous donne, bien entendu, le fait comme on me l'a donné, et je ne m'en porte nullement garant. Si cependant l'histoire est authentique, les adversaires de la coopération n'ont qu'à moitié réussi, puisque MM. Macdonald et Burt vont remplacer les deux membres non réélus, qu'en outre Newcastle a nommé M. Joseph Cowen, coopérateur déterminé, et qu'enfin M. Brassey vient de se déclarer partisan de l'idée nouvelle.

Puisque je parle des amis de la coopération, encore un mot sur leur compte afin qu'on puisse bien les apprécier. M. Brassey est fils du plus grand constructeur de chemins de fer du monde entier ; c'est-à-dire qu'il est fort riche ; M. Morrisson, lui, a eu pour père un des plus dévoués ligueurs de Cobden, celui qui, à un moment où les courages faiblissaient et où les ressources étaient épuisées, mit 100,000 liv. st. (2,500,000 fr.) au service de la Ligue. Il a, paraît-il, laissé à ses quatre fils une fortune de 5 à 6 millions de liv. st., c'est-à-dire 125 à 150 millions de francs. Je vous assure qu'au costume des plus simples de M. Morrisson, ici présent, on ne se douterait pas qu'il a de l'or à remuer à la pelle. Et c'est un partisan dévoué de la coopération.

M. Brassey a prononcé un discours que je me permets de trouver remarquable et fort sage. En voici d'ailleurs le résumé.

Après un exposé rapide de la situation des Sociétés coopératives, exposé qui n'a contenu que les renseignements que je vous ai donnés dans mes lettres de Manchester, il a abordé le côté philosophique, le plus important dans une telle bouche. Il a d'abord reconnu

que le problème de la répartition des profits de l'industrie entre le travail et le capital, le génie créateur et l'intelligence directrice et organisatrice de l'échange et de la production, est un des plus grands problèmes de ce siècle. Il a ensuite constaté que ses auditeurs appartenaient, pour la plupart, à la classe intéressée à ce que justice soit rendue au travail, et qu'il appartenait, lui, à la classe des gens intéressés à ce que le capital garde ses droits. Il s'est ensuite efforcé de démontrer que le capital n'a pas les profits que l'on croit et qu'il est proportionnellement moins rétribué que le travail. Les capitaux anglais sont constamment sollicités par les travailleurs étrangers, et notamment par ceux de l'Amérique qui leur paient un revenu d'un tiers plus élevé. Néanmoins l'écart existant entre la position des riches et celle des pauvres rend le poids de ceux-ci plus lourd et plus pénible à porter. On comprend qu'en se plaçant à l'unique point de vue de la satisfaction des besoins de la vie, l'accumulation du capital entre certaines mains puisse paraître un fait excessif. Le socialisme n'est autre chose que la protestation des pauvres contre une inégale répartition ; mais le système de l'égalité absolue est contraire aux lois de la nature. Quoique puissent dire les poètes, les sentimentalistes, les agitateurs, il ne peut pas y avoir égalité de répartition dans une société composée d'individus inégaux en connaissances, en aptitudes naturelles, en forces physiques et intellectuelles. Mais si l'égalité ne peut régner, la justice peut exister.

En se plaçant au point de vue de la justice, M. Brassey se réjouit de voir le système coopératif s'introduire dans la production. Dans une manufacture ou dans une ferme coopérative, le producteur est à la fois capitaliste et travailleur. Comme ouvrier, il apprécie

les droits du capital créé par ses efforts passés ; d'un autre côté, donner à celui-ci une trop grosse part serait se faire du tort à lui-même

La coopération productive doit mettre un terme aux contestations relatives aux salaires ; elle doit même en faciliter la solution dans les entreprises qui resteront basées sur le système actuel, en fournissant une mesure exacte des services rendus par le capital et le travail. Ce que l'on demande dans toutes les contestations pour cause de travail, c'est une règle équitable qui puisse être appliquée par un tribunal impartial.

Un autre avantage de la coopération, c'est de répartir le capital entre un plus grand nombre de mains, et ce résultat fait vivement désirer par M. Brassey le développement du système.

Toutefois, la chose n'est pas sans souffrir quelques difficultés relativement à la direction. Un comité est bon pour délibérer ; mais, pour l'exécution, il ne vaut jamais l'action d'un seul homme. M. Brassey a ensuite critiqué certaines formations d'associations dans lesquelles un industriel qui a fait fortune transfère son industrie à un groupe d'actionnaires. Un homme capable se retire de l'industrie, et des ignorants gaspillent la richesse publique. Il a aussi recommandé l'extension des Sociétés de distribution, l'économie du charbon que pourrait faire réaliser à l'Angleterre un profit de 20 à 30 millions de livres sterling tous les ans. Il désirerait que la coopération fût appliquée à l'instruction et aux divertissements. Il recommande l'étude de la musique, le développement et le relèvement du théâtre, l'établissement, par le gouvernement, de banques populaires dans les villages, à l'exemple de ce qui existe en Suisse. Il dit que l'on doit de la reconnaissance au défunt gouvernement libéral pour la loi sur l'instruction et pour la loi sur

la réparation et la construction des logements d'ouvriers. Il a exprimé l'espoir de voir les travailleurs des divers pays se rapprocher—probablement ce grand capitaliste ne désire pas la reconstitution de l'Internationale !—pour amener l'établissement de la paix définitive entre les nations. Enfin, il a déclaré que les riches avaient des devoirs à remplir envers les pauvres, les employeurs vis-à-vis des employés, et a terminé en affirmant qu'il n'était pas vrai qu'il existât des haines de classes en Angleterre.

INDEX

- ABERDARE, Lord, quoted, 134
- Africa, as a market for British products, 234, 339
- Agricultural distress (House of Commons, July 1879), 253; its severity, 253; serious effects of foreign competition, 253; progress of British farming, 254; necessity for a Royal Commission, 254; importance of mode of cultivation and description of produce, 255; articles in which home farmers have a monopoly, 256; increase in the importations of animal food, 256; competition of the United States in the cattle trade, 257-259; serious fall in the value of hops, 260; decline in the price of home-made cheese, 261; dairy farming in the United States: increase of production and exports, 262; the question of protection, 262; precedents for an inquiry, 263; subjects on which information desirable, 264; the future of agriculture, 266
- Agricultural holdings (letter to the 'Times,' July 19, 1879), 268; size of holdings in France, Belgium, and Germany, 268; systems of cultivation and results attained on the Continent, 269; average acreage of holdings in the United Kingdom, 270; moderate holdings adapted to poultry rearing and dairy farming, 270; small *versus* large holdings, 271
- Agricultural labourers, moral and social condition of, 137-142; wages, 138-141, 284
- Agricultural produce, statistics of British and foreign, 195, 196, 236, 256, 273-279, 285-287, 308
- Agriculture in England and the United States (presidential address, Statistical Society, November 1879), 272.— In the United States: acreage, product and value of leading crops in 1878, 273; maize, 273; average yield of wheat compared with Europe, 275; increase of acreage and fall in price, 275; oats and other cereals, 276; the potato crop, 276; green crops, 277; cotton, 277; numbers and value of live stock, 277; competition with British farmers, 278; vicissitudes of the seasons, 278; freights and railroad charges, 278, 280; decline of agriculture in the Eastern States, 279; fall in the price of live stock, 279; exports of live stock and preserved provisions to the United Kingdom, 281; sheep husbandry, 282; wool growing, 282; prices obtained for products on the English market, 283; cost of labour,

- 284; advice and assistance given to farmers by the Department of Agriculture, 285.—In England: change in the cultivation of the land, 285; increase of permanent pasture, 286; potato cultivation, 286; fruit culture, 286; market gardening, 287
- Algeria, British trade with, 243, 340
- Allen, Mr., evidence before Trades Union Commissioners cited, 6
- America. *See* United States
- Andrew, W. P., schedule of tenders for the supply of engines to the Punjab Railway, 27
- 'Annual Register,' quoted, 130
- Arbitration awards, 291, 324. *See* Lightermen of London and Staffordshire Potteries
- Arch, Joseph, 49, 137; on farm labourers, 141
- Archibald, Mr. (British Consul-General, New York), on co-operation, 96; on wages in the United States, 177
- Argentine Republic, exports of cotton goods to, 249
- Aristotle, quoted, 216
- Arnold, Matthew, quoted, 222
- Artisans and Labourers' Dwellings Acts, 1868, excellent results produced by, 124
- Asia Minor, 339
- Atkey's cooking-stove for yachts, 43
- Australia, as a source of food supply, 236; British trade with, 294; annual consumption of meat in, 308; hours of labour, 342
- Austria, co-operation in, 96, 119; British competition with, 168, 171; effects of rash speculation in, 213
- BACON, Lord, quoted, 74, 86
- Bad harvests, losses from, 213, 214
- Bagehot, Mr., quoted, 217, 239
- Baker, Mr. (inspector of factories), on the cotton trade, 168
- Bakewell, Mr., 254
- Bal, M., on British and foreign shipping, 56
- Bank rate, 1867 to 1883, 157, 316
- Barron, Sir Henry, on the industrial situation in Belgium, 150, 268, 269
- Beaconsfield, Lord, 209, 213
- Beaumont's (Capt., R.E.) coal-cutting machines, 43
- Beazley, Mr., on the importation of American cattle, 259
- Beckett, Sir Edmund, on trades unions, 162
- Belgium: agriculture in, 268, 275; competition with Great Britain, 48, 168, 226; cost of living in, 18, 59; cotton industry, 16, 60, 171; employment of children in coal mines and factories, 63; the industrial situation in 1872, 150; labour and wages, 12, 14, 16-18, 34, 48, 227, 342; supply of rails to England, 29, 30; working expenses of railways, 12, 306
- Bell, Lowthian, on the comparative cost of labour in mines and iron-works, 13, 14, 153, 218, 246; on the causes affecting the price of coal, 37; on the mineral resources of the United States, 71; on over-production in the iron trade, 159, 313
- Bessemer, Sir Henry, on the economy of his method of manufacturing steel, 44-47
- Bigelow, Erastus, on manufacturing corporations in the United States, 86
- Bismarck, Prince, 233
- Bloor, Mr., 291, 292
- Bolingbroke, Lord, quoted, 183
- Booth, Charles, 333
- Booth, General, social scheme of (Hastings, November 1892), 332; the Salvation Army, 332;

- 'Darkest England,' 332; objects of the scheme, 333; difficulty of the task, 333; General Booth's Essex colony, 333; emigration, 334; administration of the poor law: its cost, 334; the evil too vast for private organisations to cope with, 335; helplessness and hopelessness of the 'submerged tenth,' 335; the scheme stated to have diminished the incomes of other charities, 336
- Booth, Isaac, on the wages of coal miners, 219
- Brabazon, Lord, on the condition of the industrial classes in France, 62, 114
- Bradlaugh, Charles, 49, 342
- Bradshaw, Mr., on the sacrifice of life in the African slave trade, 234
- Bramwell, Lord, 313
- Bramwell, Mr., 47
- Brassey, Mr. (the late), 1, 9, 11, 18, 28, 74, 112, 129, 155, 164, 194, 201, 250, 337
- Breslau Chamber of Commerce, report cited, 59
- Bridges and Holmes, Messrs., on the increased skill of operatives in textile factories, 61
- Briggs, Messrs., profit-sharing system adopted by, 5, 106
- British Museum, cost of fluted columns, 193
- British possessions, aggregate value of exports to, in 1873 and 1877, 243
- British trade and British workmen (Church Congress, Newcastle, October 1881), 300; the Church and the labour question, 300; vital importance to the nation of the efficiency of our workmen, 301; recent trade statistics as a test of progress, 301; the cotton trade, 302; the testimony of foreign tariffs, 303; comparative insignificance of our imports, 304; ascendancy of Great Britain in shipbuilding, 305; the industry subsidised in France and Germany, 305; British and continental railway enterprise, 306; character of our workmen, 307; policy of the trade organisations, 307; the cost of living, 308; moral and material progress of the working classes, 308; the encouragement of thrift, 309; great disparity between rich and poor, 309; beneficent influence of commerce, 310; responsibilities of capitalists and employers, 310
- Bruce, George Barclay, 323
- Building trade: cost of materials, 187, 188, 191; increase of rate of wages in London and Manchester, 6-8; numbers belonging to the trades unions, 9; wages and hours of labour, 7, 8, 9, 10, 177, 182-207. *See* London building trades
- Burke's 'Observations on the Present State of the Nation,' quoted, 308
- Burmah, 339
- Burnett, Mr., 313
- Burt, Mr., 312, 347
- 'Butty' system of piecework, 99, 144
- CAIRD, Mr., on the meat supply of the United Kingdom, 256, 258, 259; on the settlement of land, 265; on agricultural holdings, 270; on wages of farm labourers, 284
- Cairnes, Prof., 211
- Canada: labour and wages in, 9, 67, 68, 74; average consumption of meat in, 308
- Canada Works, Birkenhead, wages paid for skilled labour from 1854 to 1869, 19
- Carlyle, quoted, 35, 73, 241

- Cattle rearing in the United States, expense of, 257; cost of transport to Great Britain, 258; numbers exported, and percentage of losses on the passage, 259, 281; prices realised in England, 259
- Chaplin, Mr., 253, 281
- Charity Organisation Society, recommendations of, with regard to workmen's dwellings, 122, 123, 124
- Cheese, quantity and value of the home product in 1876, 261
- Chevallier, M. Michel, cited, 14
- Children, employment of, in factories, 20, 62, 169; of both sexes, in Belgian coal-mines, 63
- Chili, exports of cotton to in 1874, 249
- China: British trade with, 210, 303; as a future market, 334, 339
- Church, attitude of the, towards labour combinations (Church Congress, Folkestone, October 1892), 327; duty of the clergy towards the industrial problem, 327; an ideal condition of industry, 328; slow progress of co-operation, 328; modern tendency towards concentration of industrial work, 329; sphere of the Church in relation to labour: trades unions, 329; courts of conciliation, 330; strikes, 330
- Cités ouvrières at Mülhausen and Paris, 114
- Clarendon, Earl of (the historian), 343
- Clarendon, Lord, 268
- Clarke, Mr., on the food supply of the United Kingdom, 256, 261
- Coal: annual production of, in Great Britain, 37; quantity consumed in manufactures, 37; inventions for economising consumption, 43-48; amount required to make one ton of iron or steel rails, 44-47; prices of, at various periods, 133, 134, 166, 196, 219
- Coal Committee of 1873, report cited, 37-39, 219
- Coal-cutting machines, 43
- Coal mines, profits and cost of working, 39, 40, 133; hours of labour in, 41, 42; the double-shift system, 42; employment of children of both sexes in Belgium, 63; numbers employed in, 220
- Cobden, Mr., on the causes of agricultural distress, 265
- Cobden, Richard, 347
- Colliers, wages of, at home and abroad, 33, 38, 63, 134-137, 154, 219; strike of, in South Wales, in 1873, 33, 35, 133
- Colman, Mr., establishment of a workmen's kitchen by, for his employés, 113
- Colonies, the: importance of our trade with, 234-237, 339; as a field for emigration, 237, 238; railway progress in, 321
- Commissioners of Customs, reports cited, 226, 302
- Connolly, Mr., evidence before the Trades Union Commission, quoted, 3
- Consols, average price of, in 1860 and 1884, 316
- Cooking-stoves for yachts, 43
- Co-operation, 72; unsuitable for large undertakings, 91, 97, 143, 318; slow progress of, 198, 328
- Co-operative Congress, Halifax, in 1874, account of the proceedings, quoted from the 'Journal des Débats,' 345
- Co-operative management, disadvantages of, as compared with individual management, 85-87; selection of agents, 88; necessity of a knowledge of détail, 88; the supervision of subordinates, 89; unwillingness to pay adequate

- salaries, 89; qualifications essential for, 89, 90; the manager to be subject to the control of the contributors of capital, 91; mode of his appointment, 91; difficulties in adjustment of wages, 93; competing for business, 94
- Co-operative production (address to Co-operative Conference, Halifax, 1874), 76; progress of co-operation, 77; effect on the retail trade, 77; object of the movement, 78; a remedy for the jealousy of capital, 79; a probable standard for the adjustment of wages, 80; its influence on the relations of employers and employed, 81; danger of too low a rate of interest, 83; tendency to promote a more equal distribution of capital, 85; co-operative management, 85-94; effects of, in the United States, 86; difficulties in applying the principle to production, 92; failures more numerous than successes, 92; strike for higher wages at the Ouseburn Engine Works, 92; the wages question, 93; co-operative concerns abroad, 95-97; the system unsuited to large undertakings, 91, 97; its application to railway sub-contracts, 98-101; systems of partial co-operation, 104-108; the principle not applicable where individual management indispensable, 108; nor to large railway contracts, 109; nor where long delays in realising profits inevitable, 111; purposes to which it may be beneficially applied, 113, 119; value of education to the movement, 120; plans for the amelioration of the condition of the people, 121-124; solidarity between working classes, 124; duty of the rich to the poor, 125
- Co-operative societies, number of, in 1872, in England and Wales, and aggregate membership, share capital, and profit, 77; societies for co-operative production, 92, 94; co-operative stores of the North of England, 198
- Copper, difference in the price of, in 1864 and 1874, 166
- Cotton goods, exports and imports of, 16, 227, 249, 302
- Courts of conciliation, 330
- Cowen, Joseph, 347
- Cowper, E. A., on the consumption of coal in marine engines, 47
- Crawshay, Mr., on the South Wales coal strike in 1873, 33
- Crimea, the: employment of English navvies during the siege of Sebastopol, 321
- Crowe, Sir Joseph, 340
- Cyprus, British enterprise in, 251
- 'DAILY BULLETIN,' the (American), on the prospects of agriculture in the United States, 288
- Dairy farming in America, 262
- Dairy produce, imports of, 256, 261, 282; prices of, 196, 261
- Dale, David, 312
- Dalhousie, Lord, 312
- 'Darkest England' (General Booth's), 332, 335
- Defoe, quoted, on Dutch and English workmen, 244
- Denton, Baily, quoted, 264
- Dilke, Sir Charles, 312; his opening remarks to the Industrial Remuneration Conference, 1875, quoted, 313
- Dockyards, wages paid at Sheerness, in 1849, 1859, 1869, 22-24
- Dolfus, M., reduction of hours of labour in his establishment at Mülhausen, 17
- Dowden, Professor, cited, 309
- Drummond, Victor, on dairy farming in the United States, 262

- Dun & Co.'s American mercantile agency, report on Government sales of land in 1877 and 1878, quoted, 229
- Dusantoy, M., numbers employed and wages paid at his military clothing establishment, Paris, 20
- EARTHENWARE, value of exports and imports, 1875-9, 242-246
- Easton & Anderson's (Messrs.), strike of engineers against the 'butty' system, 144
- Eccles Co-operative Quilt Manufacturing Society, 92
- 'Economist,' the, quoted, 132, 134, 142, 146, 166, 173, 174, 175, 253; on pioneers in the West, 230-232
- 'Economiste Français,' quoted, 279, 289
- Economists, the, 95
- Ecuador, value of exports to, in 1873 and 1877, 243
- 'Edinburgh Review,' quoted, 28
- Education in England, 120; in Germany, 121; in Greece, 121; in the United States, 120, 206, 207
- Education Act, the, 120, 298
- Egerton, Mr., on the hours of labour in Russia, 60
- Eggs, estimated retail value of daily import (1879), 270
- Eight hours question, the, 341
- Elliott, Ebenezer, 309, 310
- Elliott, Mr., on the double-shift system in mines, 42
- Emigration, effect of, on the price of labour in England, 65; economic value of, 237
- 'Engineering,' quoted, 172
- Engineering trades. *See* Iron and engineering trades
- Esscher, Weiss & Co., Zurich, locomotives manufactured for Indian railways by, 25, 26
- Exports, British, 148, 149, 167, 214, 235, 243, 402. *See* under names of commodities
- FACTORY Acts, the, 298
- Fallows, Messrs., on labour and wages, 218
- Familistère*, or workmen's dwellings (M. Godin's), at Guise, 113
- Fane, Mr., on wages in France, 18, 20
- Farm labourers. *See* Agricultural labourers
- Farms, size of, in Belgium, 268; in England, 83, 84, 270; in France, 268; in the United States, 83, 84
- Faupertius, M., on the state of agriculture in Pennsylvania in 1879, 279
- Fawcett, Mr., quoted, 223; on foreign tariffs on British goods, 170
- Female labour in textile factories, 16, 20, 59, 61, 64, 66, 169
- Ford, Mr., quoted, 95
- Foreign Loans Committee, revelations of the, 200, 225, 226
- Forth Bridge, the, 322
- Foster, G. B., on the wages of Northumberland colliers, 219
- Foster, Mr., value of his Education Act, 120
- Fourier, quoted, 82, 116
- Fox, Head & Co., profit-sharing system of, 104-106
- Foxwell, Professor, 312
- France: agricultural holdings, size of, 268, 269; cost of living in, 18, 308; employers and employed, relations of, 62, 106-108, 113-118; exports and imports, 16, 53, 149, 167, 227, 296, 340; growth of population in, 309; locomotives supplied to Indian and English railways, 27, 28; M. Godin's scheme of profit-

- sharing, 106 ; protective tariffs, 149, 233, 234, 339 ; railway working expenses, 306 ; sheep-breeding in, 254, 283 ; subsidies to merchant shipping, 305 ; textile industries, efficiency of labour in, 15, 16, 168, 171 ; wages and hours of labour, 11, 13-16, 18, 20, 21, 24, 29, 60, 62, 64, 201, 342 ; wheat, average yield of, per acre, 275 ; workmen's dwellings, 113-118
- Freights and railway charges on United States produce, 257, 278, 281
- Fruit culture in England, 286
- GALTON'S (Captain) ventilating fire-place, 43
- Gaskell's (Mrs.) 'Mary Barton,' quoted, 224
- Germany : agricultural holdings, size of, 268, 269 ; choral associations universal, 119 ; Communism in, 71 ; effects of payment of French war indemnity, 212 ; growth of population in, 309 ; industrial condition in 1871-2, 150, 151 ; locomotives supplied to Indian railways, 25, 27, 28 ; people's banks, 317 ; railways, working expenses of, 306 ; steam tonnage in 1870 and 1879, 305 ; textile industries, 15, 16, 59, 168-171 ; trade with Great Britain, 170, 211, 226, 295, 296 ; wages and hours of labour, 15-18, 20, 59, 121, 146, 155, 166, 169, 179, 190, 342
- Giffen, Mr., 312 ; on prices in the iron and cotton trades, 208 ; on trade fluctuations, 301, 304
- Gilbert's Act, 334
- Gladstone, W. E., 120, 133, 317 ; on the folly of investors, 161 ; on the commercial supremacy of the world, 228
- Glasgow Bank, the, 210
- Glass, imports of, in 1873 and 1877, 227
- Godin, M. (of Guise), profit-sharing scheme of, 106 ; his *familistère*, or general dwelling-house, for his workpeople, 113, 116
- Gosling, Mr., on Swiss workmen, 60 ; on the advantages of Switzerland in competition with Great Britain, 70
- Gould, Mr., on people's banks, 122
- Graham, Mr., on the economic value of emigration, 237
- Greece, education in, 121
- Greg, Mr., on the beneficial influence of capital, 223, 319
- Greville, Mr., on the extreme contrast between the wealthy and criminal classes, 309
- HALL, Admiral King, C.B., table of wages in Sheerness Dockyard in 1849, 1859, and 1869, compiled by, 22, 23
- Halliday, Mr., and the South Wales coal strike in 1873, 33, 36
- Harris-Gastrell, Mr., 86 ; on agricultural holdings in Germany, 268
- Harrison, Mr., 189, 238, 312
- Hartington, Lord, 264
- Hatherton, Lord, 292
- Hebden Bridge Co-operative Fustian Society, 92
- Helps, Sir A., on the benefits of labour, 41
- Henfrey, Mr., on the cost of railway work in India, 12
- Hewitt, Mr., on the price of iron in France and England, 14
- Hewlett, A., on wages in coal mines, 219
- Holland, labour and wages in, 12, 244-246, 271
- Holyoake, Mr., on the claims of capitalists, 73
- Hoppin, Prof., on the literary bonds of England and America, 232

- Hops, influence of over-production and foreign competition on the value of, 260
- Horace, quoted, 241
- Hornby, Messrs., on the effect of shorter hours on the cost of production, 17
- Hours of labour. *See* under names of trades and countries
- House property, advance in value of, 317
- House rent, increase of, 17, 197
- Howell, Mr., on wages in London building trades, 1837 to 1877, 183-185, 192, 194, 198
- Hughes, J., table of wages at Millwall Iron Works during years 1851 to 1869, compiled by, 23
- Hughes, T., 346
- Hungary: German competition with England for the supply of railway engines to, 28
- Hunt & Stevenson, Messrs., on the cost of building in London, in 1865 and 1875, 187, 188, 190, 191, 198
- Huxley, Prof., 228, 335
- IMPORTS, British. *See* under names of commodities
- Improvement of land, report of the Lord's Committee on, quoted, 264
- India: labour and wages in, 12; supply of railway ironwork and engines to, by France, Germany, and Switzerland, 22-27; British trade with, 209, 210, 216, 302, 339; fifty years of railway progress, 321
- Industrial Dwellings Company, 123
- Industrial Remuneration Conference, 1885, 312; its origin and objects, 312; report of the proceedings, from the 'Times,' 313; evidences of social progress, 314; decrease of pauperism, 315; profits on capital, 315; difficulty of finding profitable investments, 316; advantage to English labour of cheap capital, 316; co-operative industry: thrift on the part of the workmen an essential condition, 318; responsibility of capitalists, 318
- Institution of Civil Engineers (speech at annual dinner, 1888), 320; importance of the services rendered by contractors, 320; courage and endurance of the navy, 320; progress of engineering, 321; its effect on moral and material progress, 322; the future of civil engineering, 322
- International Society: reaction against, in Belgium and Silesia, 34; proposes an international strike, 36, 69; and the German socialists, 71; its hostility to the co-operative principle, 73; its debates, 205
- Iron and engineering trades: English and foreign labour, comparative efficiency of, 13, 14, 24, 48, 166; hours of labour, 135; effect of over-production, 132, 216; piecework in, 144, 145; strikes, 3, 92, 144; wages, at home and abroad, 19, 21, 23, 24, 51, 56-58, 135, 144, 153, 218, 307
- Iron, pig and finished: annual production of pig iron in Great Britain, 1870 to 1873, 159, 160; coal required to make one ton of finished rails, 44, 46; exports and imports, 37, 48, 53, 145, 227, 302, 304; foreign tariffs on, 170; prices of, at various periods, 14, 33, 38, 133, 160, 166, 218
- Iron smelting, comparative cost of labour in, on the Continent and in England, 13, 14
- Italy: cheapness of labour in, 12; working expenses of railways, 306; growth of population, 309

- JAMES, STANLEY, on wages in the United States, 153
- Japan, British exports to in 1873 and 1877, 243
- Java, value of British trade with in 1873 and 1877, 243
- Jeans, Mr., on the comparative earnings of workmen at home and abroad, 314
- Jevons, Prof., 239; on the State in relation to labour, 314
- Jocelyn, Mr., on co-operative production in Sweden, 97
- Joint Stock Companies Acts, results of, 87, 161
- Jones, Lloyd, 346
- 'Journal des Débats,' report of the Co-operative Congress at Halifax, April 10, 1874, 345
- KAY, Mr., on the size of agricultural holdings in France, 268, 269
- Kelley, Hon. D., on the results of Great Britain's policy of non-protection, 49
- Kennedy, Mr., on the International Society, 34; on the Belgian operatives of Alost and Tirmonde, 63
- Kiessler, Messrs. (of Esslingen), supply of engines to Indian railways by, 25, 26, 28
- Kohn, Prof. Gustav, on the cost of building in London and Zurich, 192
- LABOUR, comparative efficiency of English and foreign, 13, 146, 165; alleged decline in skill of the British workman, 165; similar complaints as to foreign workman, 165; the evidence of British and foreign trade statistics, 166; relative value of labour in textile factories on the Continent and in England, 167-170; protective tariffs against British products, 170; superiority of England in capital and skilled operatives, 171; the shipping industry: strike in the Clyde yards, 171, 172; estimated loss to employers, and in wages, 172; competition for the sea carrying trade, 174; wages and the cost of living in the United States, 175-177; high wages cause high prices and diminished power of competition, 178; scarce and dear labour a stimulus to the development of labour-saving machinery, 178; industry and energy of American workmen, 179; restraints on production in England a help to American competition, 179; difficulty of obtaining impartial opinions on the subject, 244; Defoe on English and Dutch labourers, 244; Mr. Watson on the modern Dutch mechanic, 244-246; J. G. Porter, Prof. Leone Levi, John Stuart Mill, and Mr. Wilson on British labour, 247, 248; Mr. Newmarch, Mr. Wells, and Mr. Morley, on Great Britain's position in international commerce, 248-250; the late Mr. Brassey on the uniformity in the cost of labour, 230; determination and energy of British workmen, 250-252
- Labour, the price of in England (from the New York 'International Review,' September 1876), 128; the law of wages, 128; legislation affecting trades unions, 130; low rate at which capital obtainable, 130; effect thereof on trade and wages, 131; extraordinary inflation and rapid advance of wages in the iron and coal trades in 1871-73, 132, 133; the reaction: demand for a reduction in wages, 133; unsuccessful strike of colliers, 134;

- reduction of hours and increase of pay in the finished iron and engineering trades, 135; Mr. Potter on wages and trades unions in the iron and coal trades, 135-137; agricultural labourers: demands for higher wages, 137; course adopted by the employers, 138; result of the struggle, 138; position of the agricultural labourer in the market, 138-142; situation of the farmers, 142; suggestions for reconciling the conflict between capital and labour: co-operation, 143; payment by results, 144; piecework, 145; English and foreign labour, 146
- Lafitte, Pierre, quoted, 238
- Laing, Mr., on the Blaenavon Coal-mining Company, 40
- Lassalle's system of socialism, 71
- Laveleye, M., on the reclamation of land in Belgium and Holland, 271
- Lavergne, M. Leonce de, 266; on sheep-breeding in England and France, 254; on agricultural holdings in France, 268
- Lecky, Mr., his 'History of the Seventeenth Century,' quoted, 244
- Leeuw, Dr. Leo de, on the iron trade in France, 166; on the cost of labour in English and German cotton factories, 169
- Lefevre, Shaw, on the agricultural development of America, 288
- Leroy-Beaulieu, M., on the future of agriculture, 289
- Levi, Prof. Leone, on labour and wages in England, 20, 247; on our foreign trade, 148, 149
- Lightermen of London and their employers, award in the dispute between (1889), 324-326
- Live stock: home and foreign statistics, 254, 259, 260, 262, 277-282; importation of, 259, 281, 282; prices obtained for imported animals, 260
- Locomotives, supply of to Indian railways, by French, German, and Swiss makers, 25-27; and to the Great Eastern Railway by the Creuzot Ironworks, 27, 28; progressive increase in cost of, 68
- London building trades, rise of wages in (Royal Institute of British Architects, 1878), 182; wages and working hours from 1837 to 1847, 183; the nine hours movement, 184; the Saturday half-holiday agitation, 184; introduction of the hour system in 1861, 184; increases of $\frac{1}{2}d.$ per hour in 1865, 1866, 1872, and 1873, 184; strike for a further rise of 1*d.* in 1876, 185; wages and hours of labour from 1847 to 1877, 185-187; the greatest advances obtained by the unskilled workmen, 187; price of materials in 1865 and 1875, 188; influence of increased cost of labour on cost of building, 188-193; experience of employers, 188-190; alleged diminished industry of the workmen, 189, 190; the introduction of piecework resisted by the unions, 193; Messrs. Lucas on the hours of labour, 193; effect of increased wages and shorter hours on the condition of the workmen, 194; the enhanced cost of living, 194-198; advance in the standard of living, 198; prominent position of the trades unions in labour disputes, 200; the rise in wages due to extensive building operations, 200; prospects of the trade, 201; evils of the system of payment by time, 202; payment by piece the only equitable system, 203; trades unions and employers,

- 203; motives and actions of the union leaders, 204; law-abiding character of English workmen, 205; natural solution of the labour problem, 206
- London Co-operative Printing Society, 92
- London Workmen's Dwellings Company, 123
- Longridge, Mr., 12
- Lowe, Mr., quoted, 164
- Lucas, Messrs., on the cost of materials, hours of labour, and wages in the London building trades, 7, 185-189, 198
- Ludlow, Mr., 346
- Lurgan Co-operative Damask Manufacturing Society, 92
- Lytton, Lord, on co-operative printing in Vienna, 96
- MACAULAY, Lord, quoted, 315
- Macdonald, Mr., 347; on the cost of getting coal in Northumberland, 39, 133; on the hours of labour in collieries, 41, 42
- Mackay, J., on wages in the building trades, 8
- McKinley tariff, the, 340
- Manchester Co-operative Printing Society, 92
- Marine engines, cost of, per h.p., 58
- Marshall, Prof., 342
- Marx, Karl, 71
- Mault, Mr., on trades unions, 9
- Mauritius, the, cost of labour in, 12
- May, Sir Erskine, 310
- Meat, imports of, 194, 255, 256, 261, 282, 308; prices of from 1847 to 1877, 194
- Metropolitan Association, the, 123
- Mill, John Stuart, 315, 327
- Mill, Mr., on the outflow of English capital, 226; on the invasion of Nature's solitudes by science, 240; on the character of the British workman, 247
- Milwall Iron Works, average rate of wages paid at, from 1851 to 1869, 23
- Minot, Mr., on the effects of the Legal Tender Act in America, 176
- Money, average rate of interest in the open markets of Europe in 1875, 131
- Montesquieu, quoted, 13, 180, 206
- Moon, Mr., quoted, 161
- Morin, General, 44
- Morley, Mr., on coal-miners' wages, 219; on the superiority of English cotton operatives, 249
- Mormons, the, 95
- Mornay, M. Monny de, 264
- Morocco, British exports to, in 1873 and 1877, 243
- Morrison, Mr., on the progress of co-operation, 77
- Morrisson, Mr., 346
- Mulhall, Mr., quoted, 301, 315
- Müller, Mr., on the crisis in the iron trade in 1875, 132
- Mundella, Mr., 36; on the piece-work system, 145
- Murray, Mr., on French protective duties on British goods, 16
- NAVVIES, wages of, 9-12; system of sub-contracting in buttygangs, 99; courage and determination of, 250; English navvies employed for the construction of the Paris and Rouen Railway, and in the Crimean War, 321
- Newmarch, Mr., his essay on 'Reciprocity,' quoted, 248
- New Zealand: yield per acre of agricultural produce in 1876, 236; limitation of hours of labour in mining work, 342
- Norway, competition of cheap Manchester goods in, 168

- ODGER, George, 49
 Ouseburn Co-operative Engine Works: strike for higher wages, 92; causes of losses, 94
 Overend and Gurney, failure of, 224
 Owen, Mr., on wages in the Potteries, 297
- PAISLEY Co-operative Manufacturing Society, 92
 Paris, the cités ouvrières of, 114
 Payment by results, advantages of the system, 144, 155
 Peabody fund, 122; dwellings, 197
 Peabody Rifle Company, 50
 Pease, Mr., on the cost of coal-getting, 38, 133
 Peel, Sir Robert, 338
 People's banks, in Germany, 317; in Switzerland, 122, 349
 Perfectionists, the, 95
 Permanent pasture, increase of, in Great Britain, 286
 Philippines, the, British exports to, in 1873 and 1877, 243
 Pickard, Mr., and the South Wales coal strike in 1873, 33
 Piecework: on railway contracts, 98; in shipbuilding, 101; the 'butty' system, 144; opposition of trades unions to, 193, 214, 307; equitable to both master and workman, 202
 Playfair, Lord, 337
 Plunkett, Mr., 59; his report on the railway riots in America, quoted, 175, 199
 Poor-law administration, 334
 Poor's Railway Manual,' quoted, 280
 Population, ratio of increase in England and on the Continent, 309
 Portal, Sir Gerald, 339
 Potter, Mr., on wages in the iron and coal trades, 136, 137
 Preserved provisions, imports of 282
 Price, Prof., 315
 Profit-sharing schemes: Messrs. Briggs', 5, 106; Messrs. Fox, Head & Co.'s, 104; M. Godin's, of Guise, 106
 Protective duties, 16, 146, 170, 210, 232, 303, 340, 341
 Pusey, Mr., 264
- RAILWAY earnings, expenses, and dividends, in Great Britain, 156, 306, 316; on the Continent, 306; in the United States, 281
 'Railway News,' quoted, 306
 Read, Clare Sewell, on the situation of the farmers in 1875, 142
 Redgrave, Mr., on labour and wages in English and foreign textile factories, 15, 16, 59, 167
 Reichenheim, Dr. G., on wages in spinning and weaving factories in Silesia, 59
 Reichensberger's 'Die Agrafraße,' quoted, 269
 Rendell, A. M., on the pre-eminence of British iron works, 25, 26
 Rhodes, Mr., 339
 Ricardo, Mr., quoted, 129
 Rifles, supply of, to Europe, by the Peabody Rifle Company, Rhode Island, U.S., 51
 Robinson, J., evidence before the Trades Union Commissioners, quoted, 8, 28
 Rogers, Prof., 316
 Royal Commission on Labour, and the eight hours question, 341
 Ruskin, quoted, 72
 Russia: the cotton industry, 15, 16, 60; exports to Great Britain, 226; the iron trade, 48; protection in, 170, 233, 234, 303; wages and hours of labour, 16, 60
 Rutherford, Dr., on the causes of

- the early losses of the Ouseburn Co-operative Engine Works, 94
- SALVATION Army, the, 332
- Savile, Mr., on the condition of the labouring classes at Chemnitz, in Saxony, 151
- Savings banks, 122, 309, 317, 349
- Schneider, Messrs. (Creuzot Iron-works), numbers employed, and rate of wages, 21, 29; facilities given to the workpeople and their families, 21; locomotives supplied to the Great Eastern Railway by, 27, 28
- Schultse-Delitsch, Mr., 96; people's banks established by, in Germany, 317
- Severn Tunnel, the, 322
- Shaftesbury, Lord (the late), 183
- Shakers, the, 95
- Shakespeare, quoted, 251
- Sheep-breeding, in England and France, 254, 283; in the United States, 282, 289
- Sheerness Dockyard, rate of wages in 1849, 1859, and 1869, 22
- Sherman, Mr., quoted, 161
- Shipbuilding, in the United Kingdom, 54, 55, 101-104, 172-174, 305, 318; in France, 56, 305; in Germany, 305; in the United States, 56
- Shipwrights: wages and hours of labour, 22, 23, 54, 55, 102, 103, 174; strike of, on the Clyde, 172
- Siam, 339
- Siemens, Mr., on Captain Galton's ventilating fireplace, 43; on the economy of coal in steamers, 47
- Siemens' furnace, 47
- Silk goods, exports of, 227
- Silver, causes of the depreciation of, 209
- Smith, Adam, quoted, 128, 217
- Smith, Prof. Goldwin, 346
- Sotteville Engine Works, wages paid at, 24; employment of English labour and supervision, 29
- South Wales, colliers' strike in 1873, 33, 133, 134
- Spain, wages paid in railway construction, 9
- Spencer, Herbert, quoted, 203
- Staffordshire Potteries arbitration award (1880), 291; former awards, 291; claim of the workmen, 292; difficulty of fixing a fair rate of wages, 292; assertions of the employers, 293; condition of the home and foreign trade, 293-296; smallness of profits: experience of an employer, 296; the award, 297; special grievances of the workmen, 297, 298
- Stanley, Lord, 18, 265
- Stark, Mr., on the piece-master system of payment, 144
- 'Statist,' the, quoted, 215
- Statistical Society, 272, 312
- Steam engines, exports of, 58
- Steel, exports of, 53, 145, 302, 304; Bessemer, 44-47
- Strikes: in the coal trade, 3, 5, 33, 36, 133; of agricultural labourers, 137; in iron and engineering trades, 3, 92, 144; proposal for a universal strike, 36, 69; abroad, 34, 35
- Sub-letting in railway contracts, 98, 99
- Sweden, co-operation in, 98
- Switzerland: competition with Great Britain, 25, 27, 70, 168; the textile industries, 70, 171; locomotives supplied to Indian railways, 25, 27; people's banks, 122, 349; railway working expenses, 306; wages and hours of labour, 64, 192
- TASMANIA, 238
- Tay Bridge, 322

- Taylor, Henry, on wages in the rural districts, 139
- Tennant, R., on coal-miners' wages, 219
- Textile industries: co-operative societies, 92; efficiency of labour in England and abroad, 15-17, 59-61, 167-171, 250, 303; female labour in, 16, 20, 59, 61, 64, 66, 169; foreign tariffs, 170, 303; number of spindles in English and foreign cotton mills, 171, 216; wages and hours of labour, 15-17, 59, 60, 63, 64, 169, 222
- Tillett, Ben, 341
- 'Times,' the, quoted, 43, 130, 138, 166, 168, 171, 190, 219, 268, 303
- Tin, price of, in 1874 and 1877, 166
- Tobacco crop of the United States in 1878, statistics of, 274, 277
- Torrens, McCullagh, 124
- Trade, the depression of (from the 'Nineteenth Century,' May 1879), 208; the depression more marked in home than in foreign trade, and in values than in quantities, 208; its causes, 209; the depreciation of silver, 209; prohibitory tariffs of the United States, 210; payment of the French war indemnity, 211; reckless speculation in Austria and Germany, 212; bad harvests at home, 213; over-production, 214; the action of the trades unions, 214; effects of over-production in the cotton trade, 215; in the iron trade, 216; in the coal trade, 219; reduction in numbers employed in iron and coal industries, 220; the relation of wages to prices, 220; the working class the chief sufferers from oscillations in prices and wages, 222; beneficial influence of capital, 223; causes prejudicially affecting British industries, 224; revelations of Foreign Loans Committee, 225; foreign competition, 226; probable future of United States competition, 228; tariff legislation in the United States, 232; protection on the Continent, 233; importance of our colonial trade, 234; its elasticity, 235; the colonies as a source of food supply, 236; colonial investments, 237; economic value of emigration, 237; the conditions of successful trade competition, 238; importance of leisure and recreation for the working classes, 239
- Trades Union Commissioners, report of, quoted, 3, 6, 8, 9, 28
- Trades Union Congress, Leicester, 1877, paper read at, 148; alleged deterioration of British workmen, 148; progressive increase of our foreign trade, 148; partly due to efficiency of British labour, 149; relations between capital and labour, 150; the industrial situation in Belgium and Germany, 150; wages and cost of production in Belgium and the United States, 152; baneful effects of imposing restrictions on labour, 154; cost of labour in mines, 154; legitimate aspirations of workmen, 155; objection of trades unions to payment by results, 155; low return on invested capital, 156; wages rise when capital abundant and labour relatively scarce, 157; international competition for the use of uninvested capital, 157; responsibility of capitalists for over-production, 158; its effect in the iron trade, 159; results of excessive competition, 160; grave charges against trades unions, 162; their need of qualified advisers, 163; purposes for which their organisation may be use-

- fully employed, 163; relations between employers and employed, 164
- Trades unions and the cost of labour (House of Commons, 1869), 1; origin of trades unions, 1; the right of combining, 2; limited power of the unions, 3; strikes mostly in opposition to reduction of wages, 3; ignorance of the leaders, 4; rate of wages dependent on the law of supply and demand, 6; advance of wages in the London building trades, 7; asserted to be due to the action of the unions, 7; true cause of the advance, 8; impossibility of uniformity of wages, 8; causes of variations, 9; tendency to equality in cost of work throughout the world, 10; wages not a real measure of cost, 10; home and foreign examples: in railway construction, 10-13; in ironworks, 13; in textile industries, 15; operation of foreign protective duties, 16; hours of labour no criterion of production, 16, 17; average wages of skilled workmen in England and abroad, 17-24; foreign competition for the supply of railway ironwork and engines to India, 22; the bulk of the contracts obtained by English manufacturers, 26; locomotives supplied to home railways by continental makers, 27, 28; causes of the loss of the English monopoly of the engine-building trade, 29; employment of English labour and supervision in continental works, 29; the native mechanics lacking in skill and experience, 29; futility of attempting to force up wages by restricting the freedom of labour, 30; trades unions as benefit societies, 30; intimidation and coercion, 30
- Trades unions and wages disputes, 32, 33, 68, 69, 178, 203-205, 307, 329
- Treaties of commerce, effects of on international European trade, 149
- Trollope, Mr., his evidence before the Trades Union Commissioners, quoted, 8
- Turgot, quoted, 215, 272, 314
- UGANDA, 339
- United States: agriculture in, 83, 213, 230, 272-290, 340 (*see* Agriculture in England and the U.S.); competition with Great Britain and Europe, 48, 51, 71, 179, 213, 226-233, 249, 254, 278; co-operation in the, 86, 95, 96; cost of living, 67, 176, 177; the cotton industry, 64, 66, 216, 249, 277; dairy farming, 262; education, effects of universal, 120, 206; exports and imports, 70, 227, 249, 259, 281, 282, 292, 341; farms, size of, 83, 34; freights and railroad charges, 257, 278, 281; interest on invested capital, 83, 157, 158, 237; the iron trade, 50, 159, 340; labour-saving machinery, 50, 178; Legal Tender Act, effect of, 176; live-stock rearing and exporting, 257-260, 279-283, 289; over-production, 210, 211; pioneers of the Western States, 230-232; shipbuilding, 56; tariffs, 170, 210, 232, 303, 340, 341; wages and hours of labour, 50, 51, 64-67, 74, 152-154, 175-178, 199, 218, 284, 302, 342; wool growing, 282
- VALE, Mr., his yacht's cooking-stove, 43
- Vegetables: the United States potato crop of 1878, 274, 276;

- acreage, yield, and prices realised in Great Britain, 286, 287
- Venezuela, British exports to, in 1873 and 1877, 243
- WAGES** in 1873 (Social Science Association, Norwich, 1873), 32; great increase in the export trade, and advance in wages between 1869 and 1872, 32; the advance attributed to a series of successful strikes, 32; the colliers' strike in South Wales, 33, 35; the International Society and continental strikes, 34; advance in the price of coal, and rise of wages in collieries, 36-38; small profits of colliery proprietors, 39; hours of labour in coal-mines, 40, 41; the double-shift system, 42; inventions for economising the consumption of coal, 43-48; the iron trade, 48; the prospects of foreign competition, 48, 49; labour and wages in the United States, 50, 51; exceptionally high rate of wages at home, 51; a monopoly of the iron trade impossible, 51; increase of exports to France, 52; superiority of British artisans, 53; shipbuilding: reduction in hours of labour and advance in wages 54; progress between 1867 and 1872, 55; condition of the trade in the United States and in France, 56; the engineering trade: increase in wages and cost of material, 56; effect of the rise in wages, 57; hours of labour and wages in cotton factories in England and on the Continent, 59-64; decline of pauperism, 69; effect of emigration on the price of labour in England, 65; wages in the United States and in Canada, 65-68; arbitration in wages disputes, 68; the legitimate province of trades unions, 69; foreign competition 70; communism in Germany, 71; co-operation, 72; the rate of wages dependent on natural causes, 74; social position of the working man, 75
- Wages, rates of. *See* under names of trades and countries
- Waterlow, Sir Sydney, 123
- Watson, Mr., on English and Dutch labour, 244
- Wells, Mr., his report on labour to the American Congress, quoted, 14, 16, 20, 56, 176, 211; on the cotton exports of the United States, 249
- West, Mr., on the cost of shipbuilding in France, 56
- Wheat, statistics of: Great Britain, 195, 236, 256, 275, 308; Australian colonies, New Zealand, and the Cape, 236; United States, 273-279, 285
- Whitehead, Mr., on fruit and vegetable growing, 286, 287
- Wildman, Mr. (earthenware manufacturer), financial results of his business in 1879, 296
- Williams, Mattieu, quoted, 49
- Wilson, Mr., 225; on England's position in international commerce, 248
- Wolowski, M., on the effects on Germany of the payment of the French war indemnity, 211, 212
- Wolverhampton Chamber of Commerce, speech at annual dinner, 1893, 337; downward tendency of trade, 337; its causes, 337; the remedies, 338; evil results of over-production, 338; opening up of new markets, 339; the cry for protection, 339; its effects in France and the United States, 340; the eight hours question, 341; objections to legislative interference, 341;

- legislative restrictions non-existent abroad, or not enforced, 342; business character of our merchants and manufacturers, 342
- Wood, Lindsay, on coal-miners' wages in Durham, 219
- Wool growing in the United States, 279, 282
- Woollen manufactures, exports of, 227, 302, 304
- Working Men's Co-operative Manufacturing Company, 96
- Workmen's dwellings: in England, 121-124; in France, 21, 113-118; in the United States, 66, 118
- Worthington, Charles (Department of Agriculture, Washington), his report for 1878 quoted, 273
- YACHT'S cooking-stove for economising fuel, 43
- Young, Mr., on labour in Europe and America, 150, 153, 155, 176



UNIVERSITY OF CALIFORNIA LIBRARY

THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

AUG 4 1921

20 Nov '63 BG

REC'D LD

NOV 7 '63 -3 PM

30m-6,'14

YC 8670

HD 8390
, B74

102079

